MODERN HARMONY

BY

CARL W. GRIMM.

A

SIMPLE METHOD

OF

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BY

CARL W. GRIMM.

FOURTH EDITION.

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PREFACE TO THE SECOND EDITION.

There are many reasons for me to feel gratified at the success of my Harmony method. Without a preface I sent the first edition of the book into the world, because the work was to speak for itself. Only in the last paragraph (§ 84) did I add concluding remarks in order to indicate my standpoint. Composers, teachers and students have used and praised the book.

As the thorough bass figuring is practically obsolete, and can contribute nothing towards explaining the chord formations and chord relationships in modern harmony, it is not employed here. My signs indicate the tonal functions of chords only. The tonal functions reveal the fact that all chords are related to each other in groups, and that these again have subordinate groups. The several subordinate groups of chords cannot be ranked in a single alphabetical file, as the thorough bass methods vainly attempt to do, but must be looked upon as clustered around higher chord-groups, and these again around other points, and so on until the tonic is reached. The system of modern harmony is founded solely upon the relationship by the Fifth and the Third. The modern key extends far beyond the original boundaries, and is not limited to a scale, which is in itself nothing more than a chord with passing tones.

The principle of "variation" that I brought forward is founded upon the master works, and adheres to the laws of logic and science. With this Harmony system, every chord of Wagner's, from Rienzi to Parsifal, can be so logically explained, that he does not appear as revolutionist, but as a wonderful explorer in the realm of tones.

My essay on the Key-extension of Modern Harmony forms an addition to the text-book, because it contains illustrations of the extreme limits of chord relationship.

To the present edition also are added Examination and Review Questions, which, no doubt, will be welcomed by many teachers. The well-nigh inevitable typographical errors in the text have been corrected; there being no reason to change anything else in the book.

I hope that this new edition will make many new friends and that the book will be productive of much good in the field of harmony study and teaching.

CARL W. GRIMM.

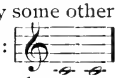
CINCINNATI, July 16, 1906.

PART I.

CHAPTER I.

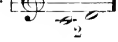
INTRODUCTION.

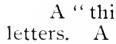
§ 1. RHYTHM, MELODY AND HARMONY are the three essential factors of music. Rhythm is the change, but systematic grouping, of tones of various duration. If tones of different pitch are heard one after another in logical order, we get what is called Melody; if tones of different pitch are heard together, we get Harmony (a chord). In its widest sense Harmony means the science of chords, their relationship and connection. It is the laws of harmony that we shall explain in this book, but it will be seen as we proceed that the question of rhythm or melody is often so closely connected with that of harmony that it is impossible to treat of one without also paying some attention to the other.

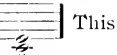
§ 2. INTERVALS.—An interval is the distance and difference between two tones, heard one after the other or at the same moment. Intervals have numerical names. These names depend on the number of letters which are included from one key of the key-board to another, or from one degree of the staff to another. Intervals are measured by means of half-steps (half tones or semitones) and whole steps. A half-step is the term of measurement for the smallest distance. It is the distance between any one note, and the nearest note to it, above or below. For example, on the piano, the nearest note to C is B on the one side (below), and C♯ on the other side (above). From B to C, and from C to C♯ are, therefore, both half steps. Similarly from F♯ to F♮, and from F♯ to G will be half-steps; but from G to A will not be a half-step, for A is not the nearest tone to G; G♯ (or A♭) comes between them. It is evident that two half-steps together will make a whole step. The nomenclature of intervals, especially the modified ones, is, unfortunately, in a somewhat confused state and not uniform in all textbooks. The classification adopted here will recommend itself for its simplicity, because the intervals are arranged into only three classes: normal, enlarged and narrowed. First of all we will learn the accurate size of the normal intervals, and then the modifications (augmentation and contraction) of them. If a tone be sounded and the same tone be repeated, or sounded simultaneously by some other instrument (or voice), a "prime" is formed, for example: 

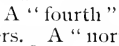
The word prime means an interval of one degree; it also means the starting note, the one from which the other notes are counted. A prime makes use of only one letter for two sounds which have the same pitch, or very nearly the same, as the paragraph on

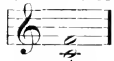
"modified" intervals will show. This prime is also called "perfect." Instead of always writing down the name of an interval, we will use figures. For the word prime the figure 1, seconds are indicated by 2, thirds by 3, etc.

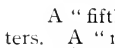
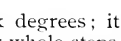
A "second" (2) is an interval between two conjunct degrees; it includes two letters. A "normal" second contains one whole step, for example:  This second is also called a "major" second.

A "third" (3) is an interval of three degrees; it includes three letters. A "normal" third contains two whole steps, for example:  This is also named a "major" third.

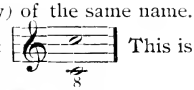
A "fourth" (4) is an interval of four degrees; it includes four letters. A "normal" fourth contains two whole steps and one half-step:  This is also called a "perfect" fourth.

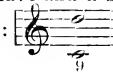
A "fifth" (5) is an interval of five degrees; it includes five letters. A "normal" fifth contains three whole steps and one half-step:  This is also called a "perfect" fifth.

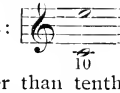
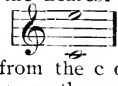
A "sixth" (6) is an interval of six degrees; it includes six letters. A "normal" sixth contains four whole steps and one half-step:  This is also called a "major" sixth.

A "seventh" (7) is an interval of seven degrees; it includes seven letters. A "normal" seventh contains five whole steps:  It is a whole step smaller than the octave. This is also called a "minor" seventh. It is to be borne in mind that our term "normal" and our figures do not indicate merely a degree, but an exact size of the interval. Our figure 7 always indicates the "minor" (dominant) seventh: therefore, we indicate the "major" seventh  as a "raised" seventh. The mark: < (short crescendo sign) means "raised," as will be further explained in the paragraph on "modified" intervals.

An "octave" (8) is an interval of eight degrees; it includes eight letters. It is always the distance from one tone to the next

(above or below) of the same name. A "normal" octave contains six whole steps:  This is also called a "perfect" octave.

A "ninth" (9) is an interval of nine degrees; it includes nine letters. It is composed of an octave and a second. A "normal" ninth contains seven whole steps:  This is also called a "major" ninth.

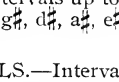
A "tenth" (10) is an interval of ten degrees; it includes ten letters. It is composed of an octave and a third. A "normal" tenth contains eight whole steps:  This is also called a "major" tenth. Intervals larger than tenths and even tenths are commonly reduced to the nearest octave, and so to their lowest terms. Thus the tenth  is usually spoken of as a third, as if it were counted from the c on the third space. It will be found useful to impress upon the memory that:

the normal or "major" second (2) is midway between the prime and third; it is at an equal distance of a whole step from each;

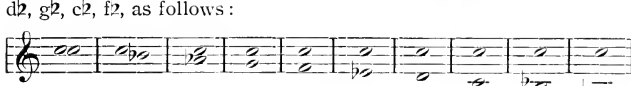
the normal or "perfect" fourth (4) is between the third and fifth; there is an intervening space of a half step from the third and a whole step from the fifth;

the normal or "major" sixth (6) is next to the fifth; a whole step farther away from the prime than is the fifth.

EXERCISE.—Write out the normal intervals up to the tenths of the following notes: g, d, a, e, b, f♯, c♯, g♯, d♯, a♯, e♯, b♯, f, b♭, e♭, a♭, d♭, g♭, c♭, f♭.

§ 3. NORMAL UNDER-INTERVALS.—Intervals are usually reckoned upwards, but occasionally also from the upper tone downward; then it must be expressly stated. In either case the interval is, of course, the same, but when reckoned downward it is called an under-interval. Thus the interval  is a fifth, but f is the under-fifth from c.

EXERCISE.—Write out the under-intervals down to the tenths of the following notes: g, d, a, e, b, f♯, c♯, g♯, d♯, f, b♭, e♭, a♭, d♭, g♭, c♭, f♭, as follows:



u = under.

§ 4. MODIFIED INTERVALS.—Intervals may be modified either by raising or lowering one of their tones. Care must be taken not to change the name of the interval. Thus, if we wish to enlarge the normal fourth C–F by a half-step we must write C–F♯, not C–G♭, otherwise the interval will not be represented as a modified fourth, but as a modified fifth.

< is the sign for raising the pitch of a note a half step.

> (short decrescendo mark) is the sign for lowering the pitch of a note a half step.

TABLE.

Showing the meaning of the figures with < and >.

	For c.	For g♯.	For f♭.
1 < raised (augmented) prime,	c♯	g×	f
2 < raised (augmented) second,	d♯	a×	g
2 > lowered (minor) second,	d♭	a	g♭♭
3 < raised (augmented) third,	e♯	b×	a
3 > lowered (minor) third,	e♭	b	a♭♭
4 < raised (augmented) fourth,	f♯	c×	b♭
4 > lowered (diminished) fourth,	f♭	c	3♭♭b
5 < raised (augmented) fifth,	g♯	d×	c
5 > lowered (diminished) fifth,	g♭	d	c♭♭
6 < raised (augmented) sixth	a♯	e×	d
6 > lowered (minor) sixth,	a♭	e	d♭♭
7 < raised (major) seventh,	b	f×	e♭
7 > lowered (diminished) seventh	b♭♭	f	3♭♭e
8 < raised (augmented) octave,	c♯	g×	f
8 > lowered (diminished) octave)	c♭	g	f♭♭

9 < = 2 <, 9 > = 2>,

10< = 3 <, 10 > = 3 >.

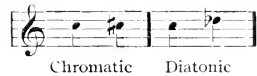
	For c.	For g♯.	For e.
u 1 > lowered under-prime,	c♭	g	e♭
u 2 > lowered under-second,	b♭♭	f	d♭
u 2 < raised under-second,	b	f×	d♯
u 3 > lowered under-third,	a♭♭	e♭	c♭
u 3 < raised under-third,	a	e♯	c♯
u 4 > lowered under-fourth,	g♭	d	b♭
u 4 < raised under-fourth,	g♯	d×	b♮
u 5 > lowered under-fifth,	f♭	c	a♭
u 5 < raised under-fifth,	f♯	c×	a♯
u 6 > lowered under-sixth,	e♭♭	b♭	g♭
u 6 < raised under-sixth,	e	b♯	g♯

	For c.	For g♯.	For e.
u 7 > lowered under-seventh,	d♭	a	f
u 7 < raised under-seventh,	d♯	a×	f×
u 8 > lowered under-octave,	c♭	g	e♭
u 8 < raised under-octave,	c♯	g×	e♯

u 9 > = u 2 >, u 9 < = u 2 <,
u10 > = u 3 >, u 10 < = u 3 <.

EXERCISE.—Write out tables similar to the above, using each of the following notes as a starting point: g, d, a, e, b, f♯, c♯, g♯, d♯, a♯, f, b♭, e♭, a♭, d♭, g♭, c♭, f♭.

If the half-step is expressed upon the same staff-degree, it is called a small or chromatic half-step; if it is expressed upon contiguous degrees, it is called a great or diatonic half-step.



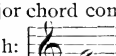
Chromatic half-step. Diatonic half-step.

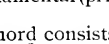
This classification, which might be called a "harmonic" classification, of intervals is entirely sufficient, because we figure every interval from the fundamental tone of a major or minor chord, and consider it in its relation to the one or the other. Therefore, we will never have to figure doubly contracted or extended intervals like a "diminished" third, for example e—g♭ found in the chord: c—e—g♭. We could indicate this and all such "melodic" intervals as doubly contracted or extended by using these signs ≷ and ≶, for example e—g♭ = 3 ≷; but, as the course will show, our method never requires the double lowering or raising signs.

CHAPTER II.

THE PURE PRINCIPAL HARMONIES.

(TONIC AND DOMINANTS.)

§ 5. MAJOR AND MINOR CHORDS. (TRIADS). There are only two kinds of consonant chords, major chords and minor chords; all dissonant chords are to be conceived, explained and indicated as modifications of major or minor chords. Major chord and minor chord are the two foundation stones of harmonic structure; dissonant chords are only modifications of them. The major chord consists of a fundamental (prime), major third and perfect fifth: 

The minor chord consists of a fundamental (prime), minor third and perfect fifth:  . The minor chord is the very opposite of the major chord, in sound as well as in construction. The major chord sounds clear, strong and cheerful, whereas the minor chord

sounds dark, weak and sorrowful. If we look closely at the intervals of these chords, we find in the major chord a minor third above the major third: g

e♭) minor third.

c) major third.

In the minor chord we find it reversed, namely a major third above the minor third: g

e♭) major third.

c) minor third.

The major chord consists of a major third and a perfect fifth, the minor chord shows the same intervals if measured downward!

major third (g / e / c) perfect fifth major third (g / e♭ / c) perfect fifth.

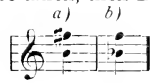
The minor chord then, in its construction, is the exact opposite and counterpart of the major chord. These two kinds of chords are co-equal in value and importance; they express contrasting moods. The tones forming these chords coalesce (blend) into a perfect unity, and around these two chords all music revolves.

§ 6. CHAIN OF FIFTHS, MAJOR AND MINOR THIRDS.

In order to learn with certainty all major and minor chords, pupils will do well to impress firmly on their minds the "chain of fifths" produced by the natural notes. Perfect fifths are formed by the tones of the natural scale in the following order:

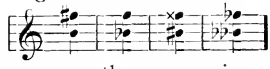
(ascending) F–C–G–D–A–E–B)
(descending) B–E–A–D–G–C–F) (to be memorized perfectly)

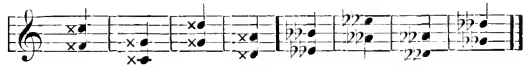
all of which are composed of three whole steps and a half-step. The connecting fifth, B F, of this series is no perfect fifth; it is too small by a half-step. It is called a "diminished" fifth. If the perfect fifth above B be gained, then F must be raised a half-step, that is, F becomes F♯; if the perfect fifth below F be taken, then B must be lowered a half-step; that is, B becomes B♭:



The fifths derived from B F distinguish themselves from all others in this: that the two notes have different signatures (as at a) the lower one is natural note, the upper one has a ♯; as at b) the upper one is natural note, the lower one has a ♭); whereas all other fifths have like signatures, that is to say, either both notes are natural notes, or both have a ♯ or both have a ♭. For the fifth of F♯ is C♯, because both notes of the F C are raised a half-step, so that the proportion remains the same; the fifth of C♯ is G♯, etc. In like manner E♭ is the under-fifth of B♭, because both notes of the E B are lowered a half-step, so that here also the proportion remains the same; the under-fifth of E♭ is A♭, etc. In other words, when we supply with sharps and flats all notes of the above rows of natural notes in the order of fifths, we will produce new series of fifths:

(ascending with ♯) F♯–C♯–G♯–D♯–A♯–E♯–B♯) (to be memorized
(descending with ♭) B♭–E♭–A♭–D♭–G♭–C♭–F♭) perfectly)

At B♯ and F♭ we have reached the end again; for if F♯ is the fifth of B it cannot be the fifth of B♯, and if B♭ is the under-fifth of F it cannot be the under-fifth of F♭; the fifths B♯ F♯ and B♭ F♭, again a half-step too small, require, therefore, in the former a further raising of the upper note, in the latter a further lowering of the lower note. To the above enumerated irregular-looking perfect fifths, B♭ F and B F♯ belong likewise those derived from B F, viz.: B♯ F× and B♭♭ F♭:  As for the remainder, only such fifths possess the proper size again as have both × or ♭♭ prefixed:



Triple sharpings and flattings surpass the limit of the imaginative faculty. The double-sharps and double-flats already test it greatly, since they presuppose the single sharpings and flattings, and lose sight of the natural notes entirely. If the pupil is perfectly familiar with the series of fifths:

F×. C×. G×. D×. A×. . . .

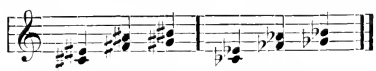
F♯. C♯. G♯. D♯. A♯. E♯. B♯.

F. C. G. D. A. E. B.

F♭. C♭. G♭. D♭. A♭. E♭. B♭.

. . . G♭♭. D♭♭. A♭♭. E♭♭. B♭♭.

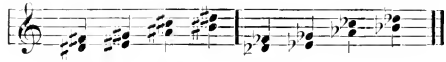
then he will be acquainted with the main pillars of all major and minor chords, the fundamentals and fifths. It is the aim now to make him thoroughly familiar also with the major and minor thirds. The three major thirds without chromatic signs are F A, C E and G B. They can be easily remembered, because they are the thirds of the first three notes in the chain of fifths: F C G] D A E B. It is clear that those thirds which are derived from F A, C E and G B by sharping or flatting both notes must be major thirds:



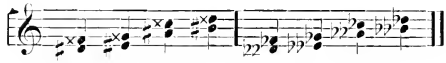
The remaining thirds without chromatic signs, D F, A C, E G and

B D, are minor thirds. To make major thirds out of them the upper note must be sharped or the lower note flatted:

It is clear that those thirds which are derived from D F, E G, A C and B D by sharping or flatting both notes must be minor thirds:



In order to make major thirds out of the preceding minor a × must be used for the upper note of the sharped ones, or a 𝄪 for the lower note of the flatted ones:



Further possible major thirds we gain by double-sharps and double-flats before both notes of the three major thirds without chromatic signs: F× A×, C× E×, G× B×, F𝄪 A𝄪, C𝄪 E𝄪 and G𝄪 B𝄪. To turn the major thirds F A, C E, G B, and all those derived from them, into minor thirds the upper note has to be lowered or the lower note has to be raised.

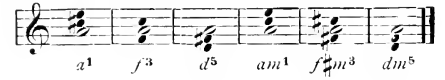
EXERCISE.—Write in notes all major chords from F𝄪, ascending in fifths, up to G×; and likewise all minor chords from D𝄪 ascending in fifths, up to E×.

= F major chord (indicated simply by f).

= D minor chord (indicated simply by dm).

m = minor.

§ 7. *Any tone can be the member* of three major and three minor chords, for example the note A:



A is the 1, 3 or 5 of a major chord, and the 1, 3 or 5 of a minor chord.

EXERCISE.—Write the six chords to which *every note* belongs. Stop where threefold chromatic signs would become necessary.

§ 8. INVERSION OF CHORDS.—A chord is in its fundamental position when the prime is in the bass. In close position the notes will always form the intervals of prime, third and fifth.

When any note not the fundamental is in the bass, the chord is said to be *inverted.*

A chord is in its *first inversion*, when the third is in the bass. In close position the notes form the intervals of prime, third and sixth, and for this reason this chord is often called the *chord of the third and sixth*, or commonly *chord of the sixth.*

A chord is in its *second inversion*, when the fifth is in the bass. In close position the notes form the intervals of prime, fourth and sixth, and for this reason this chord is commonly called the *six-four chord.*

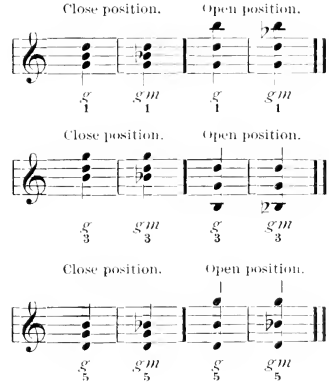
When a chord is in *open* position and the close position is wanted, then bring every note as near to the bass as possible; that is, an octave lower.

CHORDS AND THEIR INVERSIONS.

FUNDAMENTAL POSITION :
(Prime in the bass).
5
3
1

FIRST INVERSION :
(Third in the bass).
Chord of the sixth.
6
3
1

SECOND INVERSION :
(Fifth in the bass).
Six-four chord.
6
4
1



In comparing a chord and its inversions, one will find the tones forming the chords always the same, but making different impressions. The chord in its fundamental position is the front view, so to speak, and the inversions are the side views of the same chord. The chord in its fundamental position sounds restful, the inversions restless and full of motion, therefore, the inversions are found only within a composition, but never form its end.

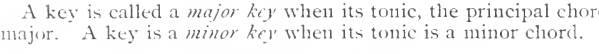
EXERCISE.—Write the inversions of all major and minor chords.

§ 9. KEY.—Tones combine to make a chord, and chords combine to make a key. A key is a family of chords. In it the principal chord, the one that gives the key its name, is called *Tonic* (indicated briefly by T). From it the key branches out to the right (upwards) and to the left (downwards). The nearest related chord

upwards is the one situated a fifth above the Tonic, and it is called the *Upper-Dominant* or *Over-Dominant*, or simply *Dominant* (indicated briefly by D). The nearest related chord downwards is the one situated a fifth below the Tonic, and it is called the *Under-Dominant* or *Subdominant* (indicated briefly by S). The Dominant represents the higher side of the key and the Subdominant the lower side. There are only three kinds of functions (offices) within a key, namely, Tonic, Dominant and Subdominant. All the other chords will have to be considered as relatives (modifications) of them.

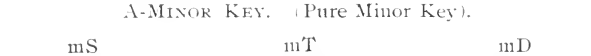
A key is called a *major key* when its tonic, the principal chord, is major. A key is a *minor key* when its tonic is a minor chord.

C-Major Key.



The three chords, T, D, S, give the signature of the major key.

A-Minor Key. (Pure Minor Key).

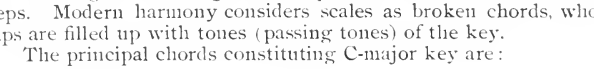


The three chords, mT, mS, mD, give the signature of the minor key.

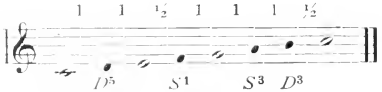
EXERCISE.—Write the schemes of all major and minor keys.

§ 10. SCALES.—A scale, generally speaking, is a series of tones arranged according to their pitch, into half and whole tone steps. Modern harmony considers scales as broken chords, whose gaps are filled up with tones (passing tones) of the key.

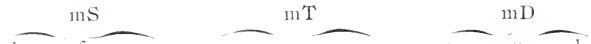
The principal chords constituting C-major key are:



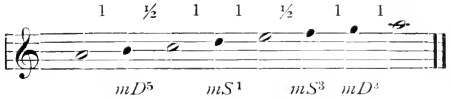
The C-major scale is a broken C-major chord (Arpeggio) with the gaps filled up with the other notes of the key, for example:



The principal chords of A minor key are:

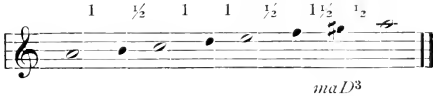


A-minor scale is merely an A-minor arpeggio, whose gaps are filled up with the other notes of the key, for example:

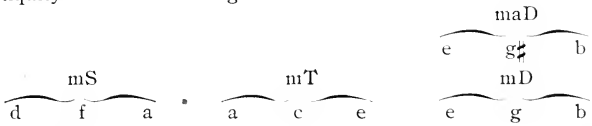


EXERCISE.—Write all the major and minor scales, indicating the Tonic tones with white notes and the passing tones with black notes.

§ 11. HARMONIC MINOR SCALE. MAJOR DOMINANT IN MINOR KEY.—Modern taste is not satisfied with the old pure minor scale, but demands a leading tone (half-step) to the octave in ascending the scale. In A-minor, therefore, a G♯ is wanted:

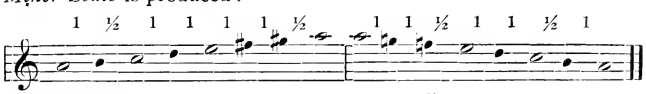


This is known as the Harmonic Minor Scale. It introduces a note not in the signature of the key. The signature of a minor key is produced by the mT, mS and mD. Instead of a minor Dominant we get a major Dominant (maD), which brightens up the higher (D) side of the minor key. So besides the mD we can use also a maD in the minor key. The major Dominant brings a major chord, that is a foreign chord, into the minor key, sufficiently indicated by the fact that the g♯ is not in the signature of A-minor. The mixed modes (keys) are a product of modern times, they were unknown to antiquity and the middle ages.



EXERCISE.—Write the schemes of all minor keys, including in them the maD, and write also all the Harmonic Minor Scales.

§ 12. MELODIC MINOR SCALES.—Because in the *Harmonic Minor Scale* the progression from the sixth to the seventh degree is *unmelodic* (difficult to sing on account of the augmented second, 1½ steps) the sixth degree is raised, and in this manner the *Melodic Minor Scale* is produced:

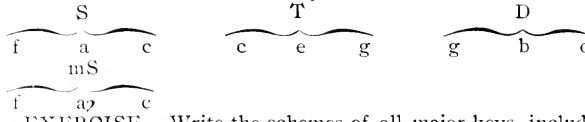


Ascending. Descending.

The *descending* Melodic Minor scale is the pure minor scale given in § 10, it is therefore still in use.

EXERCISE.—Write all Melodic Minor scales.

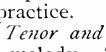
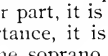
§ 13. MINOR SUBDOMINANT IN MAJOR KEY.—The major key is bright and cheerful. The minor key is dark and sorrowful. The minor key is brightened by intensifying (brightening) its Dominant side by using a major Dominant chord instead of a minor. Just so the major key is darkened (made sombre) by intensifying (darkening) its Subdominant side by using a minor Subdominant chord instead of a major. Remember that major and minor are opposites, not only in the construction of chords but also in the construction of keys, consequently if we want to find the corresponding chord in the major key, we must look for it on the reverse side of that of the minor key, and vice versa.



EXERCISE.—Write the schemes of all major keys, including in them the mS.

§ 14. FOUR-PART WRITING.—Having become familiar with all the major and minor keys and with the major and minor chords belonging to them, the next step is to learn how to connect these chords with one another. For this purpose writing for four parts (voices) is considered the best form of practice.

The voices are called *Soprano, Alto, Tenor and Bass.* The *Soprano* is the upper part, it is the principal melody. The *Bass* is next to it in importance, it is the lowest of the four parts. The voice next below the soprano is the *Alto*, and the one next above the bass is called the *Tenor*.

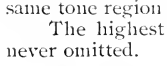
The soprano should not go higher than  and the bass should not go below  .

Since the chords have only three different tones, one of them must be *doubled* when there are four parts.

The lowest note (the fundamental, 1.) of a chord is the best for doubling. It may even be trebled. The next best note to double is the highest note (the fifth, 5.) of a chord. The third should, generally, not be doubled. This "doubling" may occur either in the same tone region or in another octave.

The highest note (5) of a chord may be omitted, the third is never omitted.

may be omitted, but also doubled.

 must not be omitted, and generally not be doubled.

good bass tone (fundamental), best for doubling.

When these notes are read in the Bass clef, we get a major chord, when read in the Treble clef we get a minor chord.

Remember the following scheme in regard to the distances of the voices from each other:

SOPRANO
. . . . . not more than an octave.
ALTO
. . . . . less than an octave.
TENOR
. . . . . may sometimes be more than an octave.
BASS

} Greatest distance between the voices

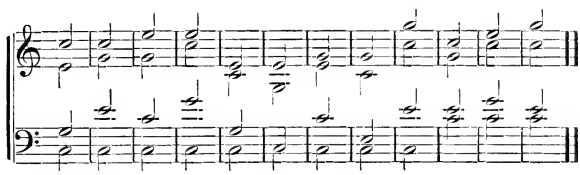
The best note for the bass is the prime (fundamental) of a chord, the next best note is the third. At the close of a period (musical sentence) it is strictly the rule to have the prime in the bass. To begin and close with the fundamental tone (1) in the soprano gives great decision and repose to that part.

The exercises are to be written in the simplest way with the two clefs, treble and bass. On the treble staff write the Soprano part with the note-stems turned upwards and the Alto with the stems turned downwards. On the bass staff write the Tenor with stems upwards and the Bass with stems downwards.

We are now able to distribute the tones of a chord among the four voices in such a manner, that the sound effect will be a good one, for example, the C-major chord:

Fundamental tone in the Bass and Doubled.

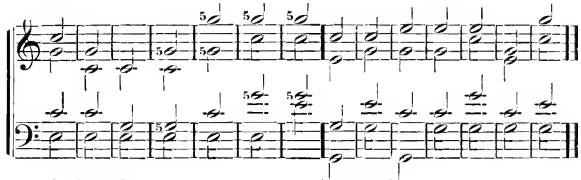
Ex. 1.



(All good.)

a) Third in the Bass. *b)* Fifth in the Bass.

Ex. 2.

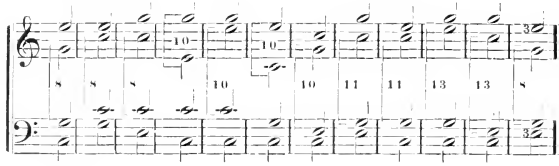


(All good.) (All good.)

In example 2 at *a)* are cases where the fifth is doubled, to which there is no objection. At *b)* all the fifths are doubled, according to the temporary rule—when the fifth is in the bass, it must be doubled.

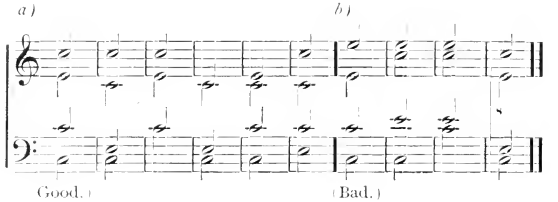
The following positions of the chord are faulty:

Ex. 3.



In the following example the fifth of the chord is omitted:

Ex. 4.



Doubling of the third, which is to be avoided altogether for the present, sounds very bad when the fifth is omitted.

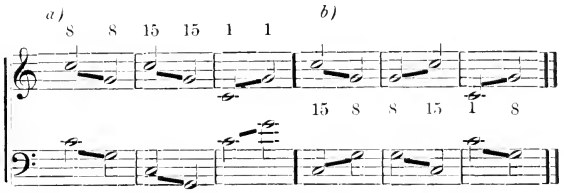
EXERCISE.—Write out a number of major and minor chords after the Examples 1–4, making them "good" or "bad."

§ 15. MOVEMENT OF PARTS.—Parts (or "voices") may remain stationary, or move up or down. When two parts move up or down at the same time they are said to move in *similar motion*. When they go in the same direction, keeping the same interval apart, they are said to move in *parallel motion*. When one part goes up while the other goes down they are said to go in *contrary motion*. When one part remains stationary while the other goes up or down the motion is *oblique*.

§ 16. RULES FOR THE MOVEMENT OF THE PARTS.—The principal law of part-writing is that *each part should go its own natural path*. No two parts must move in parallel octaves or fifths, because these blend into one tone so perfectly. Moving in octaves would mean only a repetition (strengthening) of another part, and instead of four parts there would only be three. In consequence of the similar sound of octave-tones, it is even not allowable

for two parts to proceed by contrary motion *from* notes of the same name *to* notes of the same name:

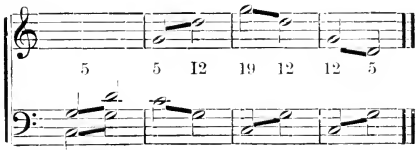
Ex. 5.



(Wrong).

Avoid also fifths in contrary motion, although these occur in the best works. The pupil should first of all acquire naturalness in the progression of parts.

Ex. 6.



(Avoid).

Every part ought to go to the *nearest* note of the new chord. The leading tone (half tone step) progressions are especially desirable; progressions by step are preferable to those by leap, but these are not excluded. The scale is really the basis of melody. The bass ought to go from the prime of one chord to the prime of the next, or else it should commonly go from one degree of the scale to the next, without skips. This rule applies only when the chords change. When the same harmony is continued the bass or any voice may move freely to a new position. The bass may take the thirds of chords by leap. When the fifth is in the bass, it is faulty to *skip from* it. *Skipping to* the fifth should also be avoided, unless it occurs upon a heavy beat of the measure and becomes the fundamental of the next chord. (More of this will be said when treating of the six-four chord further on).

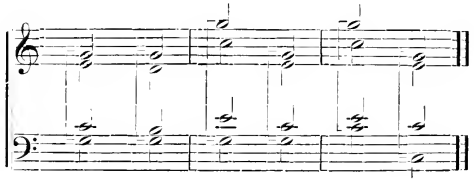
Tones which are the same in both chords keep in the same voice.

The exercises should always keep to the natural relative position of the higher and lower parts. There should be no *crossing of parts*, that is, a lower part must not cross over a higher one.

Two parts *standing still* (remaining stationary) at the distance of an octave or fifth, or skipping an octave higher or lower, are not

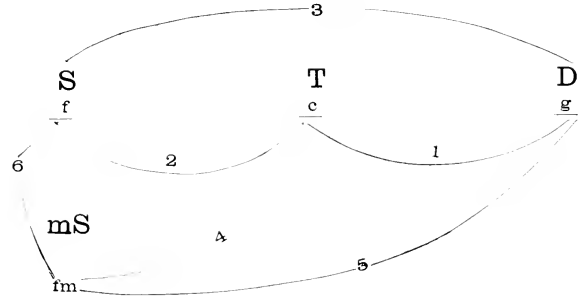
objectionable, because the rule prohibiting consecutive octaves and fifths concerns only progressions to tones of different names:

Ex. 7.



(Good).

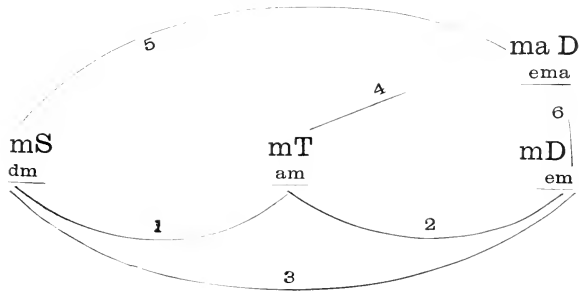
§ 17. CLASSIFICATION OF CHORD CONNECTIONS.— In order to become readily acquainted with the various difficulties of the different chord connections, and learn the inherent force and meaning of each, it will prove a good plan to classify the chord connections by naming them according to the intervals the fundamental notes produce and noting the mode of the chords. The principal chords of the major key are T, D, S and mS. We have then six possible chord connections, each having its own individual effect and peculiarities, as the pupil will learn.



1. *Fifth step*, major to major, ... T to D.
2. *Fourth step*, major to major, ... T to S.
3. *Whole tone step*, major to major, . . . S to D.
4. *Fourth step*, major to minor, . . . T to mS.
5. *Whole tone step*, minor to major, . . . mS to D.
6. *Change of mode (of chords)*, ... S to mS.

The principal chords of the minor key are mT, mS, mD and

ma D, and we have the same number of chord connections as in the major key.



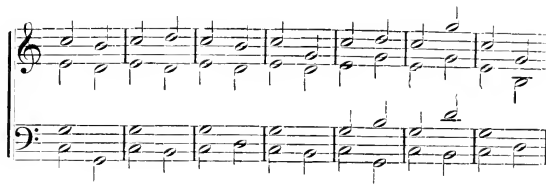
Here we find the same progressions as in the major key, but we have to figure them downwards (the opposite way), because the minor key is always the opposite of the major key, and vice versa.

1. *Fifth step*, minor to minor, ... mT to mS.
2. *Fourth step*, minor to minor, ... mT to mD.
3. *Whole tone step*, minor to minor, . . mD to mS.
4. *Fourth step*, minor to major, . . . mT to maD.
5. *Whole tone step*, major to minor, . . maD to mS.
6. *Change of mode (of chords)*, . . . mD to maD.

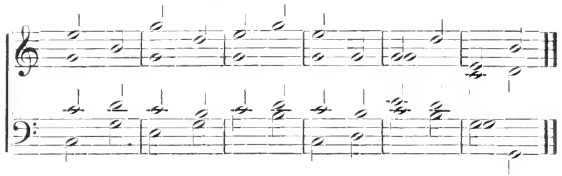
§ 18. **FIFTH STEP.** (Major to major, T—D; minor to minor, mT—mS). The Fifth step is, in the major key, a step to the nearest related chord on the upper side; in minor, it is a step to the nearest related chord on the lower side. In major it means a rising (soaring upwards), in minor a falling (sinking downwards); thus, in the first case a strengthening of the major character, in the latter a strengthening of the minor character.

The following are good progressions from the Tonic to the Dominant:

Ex. 8.

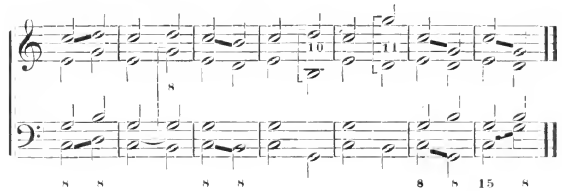


Ex. 9.



The following progressions have faults:

Ex. 10.



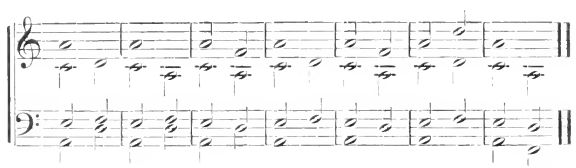
RULE.—Never double the third of the major D or the third of the minor S, because it would be equivalent to doubling the leading tone (half-tone progressions) and subsequently produce consecutive (parallel) octaves. The doubling of the third is allowed in contrary motion in the T, mT, S and mD.

EXERCISE.—Imitation of the progressions in Examples 8 and 9, starting with the other forms of the C-major chord given in Examples 1 and 2; observe all the rules.

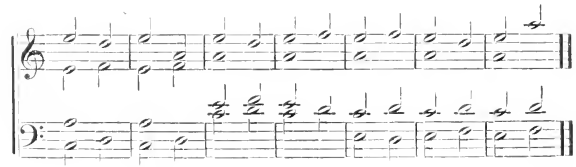
The conditions for *writing in minor* are the same as in major. The mS has one note (in A-minor key, a) in common with the mT, besides the possibility of making a leading tone step (e–f).

The following are good progressions from mT to mS:

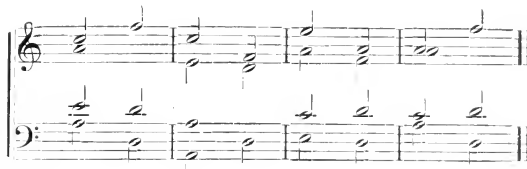
Ex. 11.



Ex. 12.

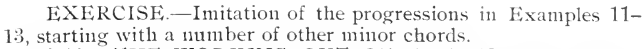


Ex. 13.



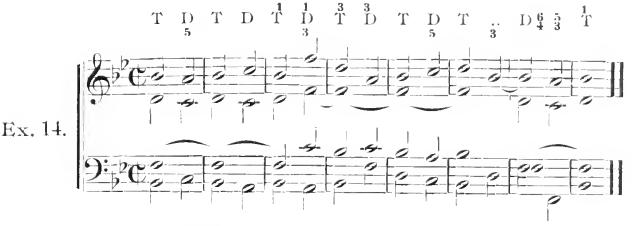
EXERCISE.—Imitation of the progressions in Examples 11–13, starting with a number of other minor chords.

§ 19. THE WORKING OUT OF EXERCISES.—We will now work out an exercise of eight measures, which gives occasion for further remarks. Take the exercise:



The signs T, D have been explained (T=major tonic, D=over dominant). The numbers 1, 3, 5, written below or above, mean that the particular note (prime, third, fifth) of the chord is to be in the lowest or highest part. The two dots (..) mean repetition of the same chord (the change of position is always allowable and generally recommended). The perpendicular strokes are the bars. 𝄵 means the time signature. No particular key is asked for, yet all the exercises given in this kind of notation are intended to be worked out in all keys, or at least in a great number of them. If we choose for the beginning to have the prime of the chord doubled in the soprano, in the key of B♭ major, our trial will perhaps turn out thus:

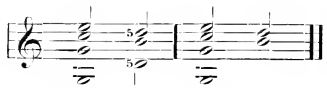
Ex. 14.



Notice that the *middle parts* (alto and tenor) have here the duty of keeping the *outer parts* (soprano and bass) together, that is, their role is to sustain notes as much as possible. In the seventh measure we have the dominant chord with two notes foreign to it, namely, the fourth and sixth, which tend downwards to the third and fifth of the chord, that is the D with *two* suspensions; it is called *dominant six-four chord*.

Suspensions shall be treated of later on, but this chord formation is so common that we use it even in the simplest exercises. The suspensions are dissonant tones, which are not allowed to be doubled, so it becomes necessary to double the fundamental.

The student is warned against doubling the fifth in resolving the chord of six-four ($D\frac{6}{4}$) into the plain dominant chord ($D\frac{5}{3}$).



(Bad). (Good).

EXERCISES.

MAJOR.

To be worked out in all Major Keys.

(1) $\frac{4}{2}$: T D | T | D $\frac{6}{4}$ $\frac{5}{3}$ | T (𝅝)

(2) $\frac{3}{4}$: T | D | T D T | D $\frac{5}{3}$ $\frac{6}{4}$ $\frac{5}{3}$ | T (𝅗𝅥.)

(3) $\frac{4}{2}$: T | D | T | D T D | T D $\frac{6}{4}$ $\frac{5}{3}$ | T

(4) $\frac{2}{4}$: T D | T D T | D | T | D : | D $\frac{6}{4}$ $\frac{5}{3}$ | T

etc.

(5) $\frac{3}{4}$: T D | T | D | T | D | T | D $\frac{6}{4}$ $\frac{5}{3}$ | T

etc

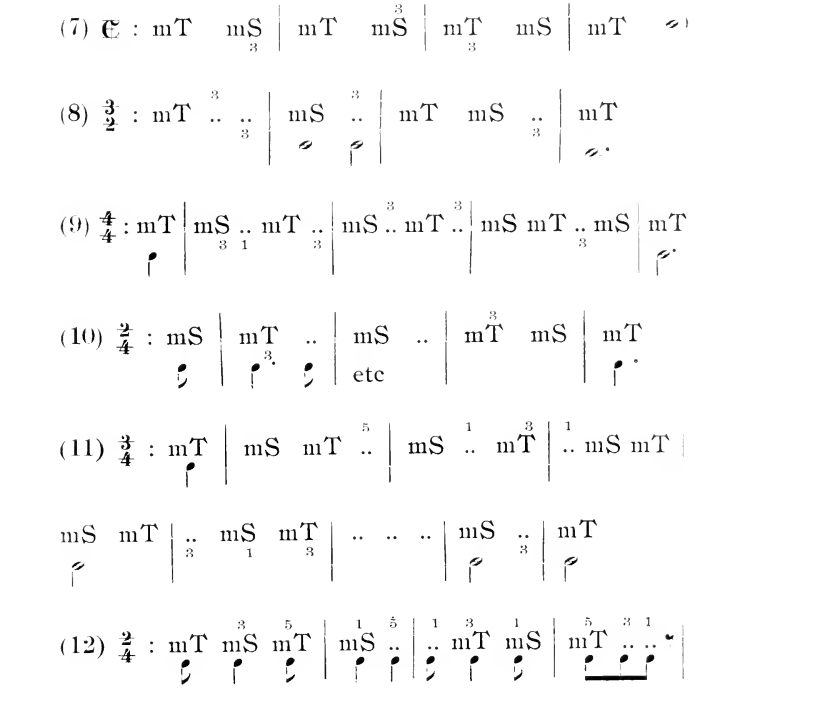
(6) $\frac{6}{8}$: T D T D | T D T | T D T | D | T

N. B.—The note after the last letter of each exercise indicates the length of the closing chord. Notes under the letters show the rhythm to be adopted.

The pupil should accustom himself to tie sustained notes and to write them as long notes within the same measure. It is good practice, and the work will look neater.

MINOR.

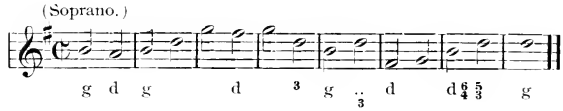
To be worked out in all Minor Keys.



§ 20. THE WORKING OUT OF A CANTUS FIRMUS. Besides exercises in which the harmonies are indicated by their tonal functions only, we will have throughout the course a second set of exercises consisting of given melodies for certain voices. Often a given melody (voice) makes impossible the nearest and best connections of chords. In this second set of exercises the harmonies are not called for by T, D, S, etc., but the fundamentals (primes) of the chords are indicated by small letters (c = c-major chord, am = a-minor chord). The pupil should always add the signs of the tonal functions when working out the exercises.

The following example illustrates how to proceed:

Ex. 15.



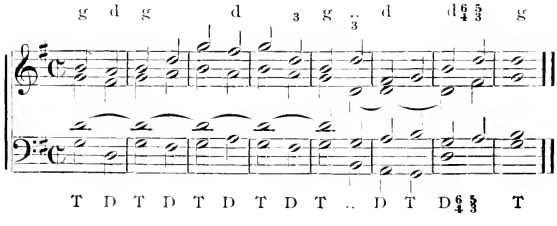
N. B.—The note itself indicates the prime of a major chord where there are figures without the chord letter, or where it is without .. or where every sign is wanting (m = minor). The figures indicate the tone to be put in the bass, but if the bass voice is the given melody, then that particular tone should be put in the soprano. When a figure is over a letter it shows that that member of the chord should be in the soprano part; when a figure is under a letter it means that that note of the chord should be in the bass.

The *cantus firmus* is written in its proper place on the staff; soprano and alto on the upper staff, with note-stems of the former upwards, of the latter downwards. Tenor and bass on the lower staff, note-stems of tenor are written upwards, of bass downwards.

The chord signs are written above the upper staff when the soprano is given; they are written between the two staves when the alto or tenor is given; they are written below the lower staff when the bass is given. The given voice should always be indicated by c. f. (*cantus firmus*) at the beginning of the staff. This is a very necessary precaution in order to avoid making an error by altering the given part when making corrections.

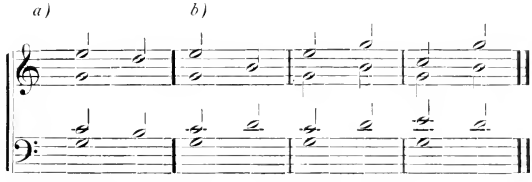
The above example, when worked out and its tonal functions indicated, may turn out similar to this:

Ex. 16.



In the seventh measure the D $\frac{6}{4}$ acts like a T with the 5 in the bass. In such a case the progression by step of a second from the fourth and sixth of this chord is not unconditionally required.

Ex. 17.

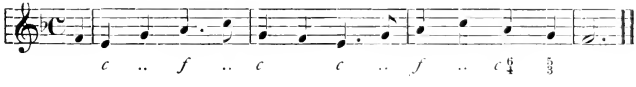


Here at b) we have changed resolutions in place of the normal one at a).

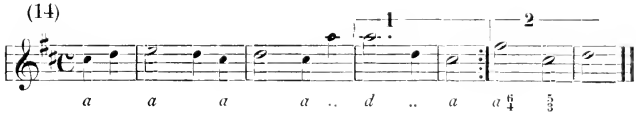
EXERCISES.

MAJOR.

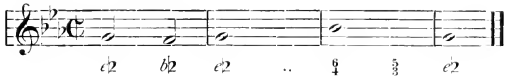
(13) Soprano given.



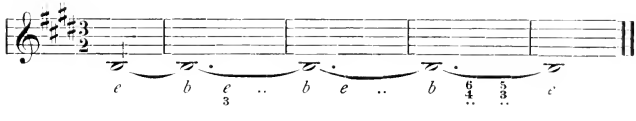
(14)



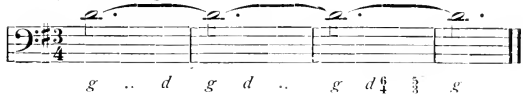
(15) Alto given.



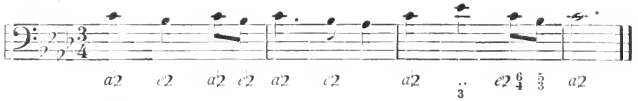
(16)



(17) Tenor given.

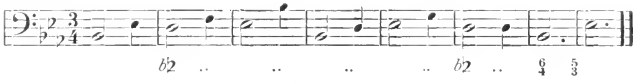


(18)



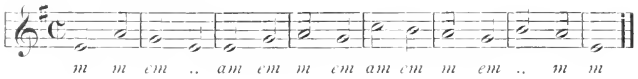
(19) Bass given.

(20)

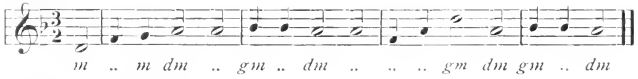


MINOR.

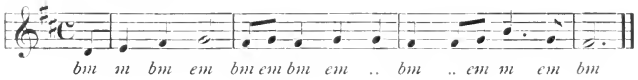
(21) Soprano given.



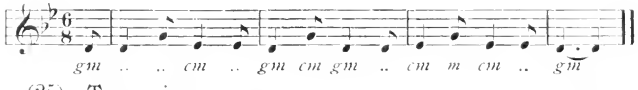
(22)



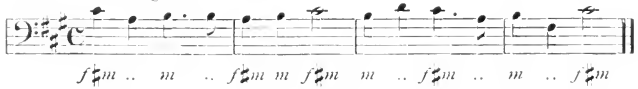
(23) Alto given.



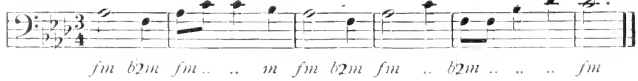
(24)



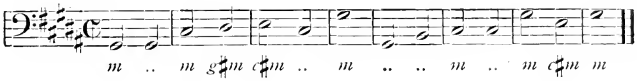
(25) Tenor given.



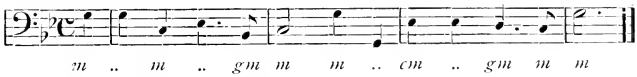
(26)



(27) Bass given.



(28)

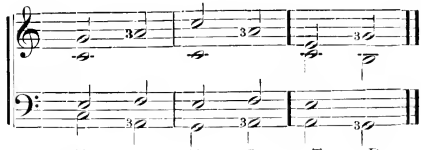


§ 21. **FOURTH STEP.** (From major to major chord, T—S; from minor to minor chord, mT—mD).

Outwardly the connection T—S is the same as the returning Fifth step D—T, and the chord connection mT—mD coincides in exterior as regards the melodious connection with the returning Fifth step mS—mT. The meaning is, however, a very different one, because the subdominant side is the opposite of the dominant side. Going to S means to go below the T into the lower tone-region; going to the mD means to go above the mT into the higher tone-region.

The third of the S, and the third of the mD, can be doubled if they are not arrived at by similar motion.

Ex. 18.



(Good).

EXERCISES.

MAJOR.

(29) $\mathbf{C}$: $\overset{3}{\mathrm{T}}$ S | T S | $\underset{3}{\mathrm{T}}$ .. | D T.

(30) $\frac{3}{2}$: T $\underset{3}{\mathrm{S}}$ $\underset{5}{\mathrm{T}}$ | S $\underset{3}{\mathrm{T}}$ S | $\underset{1}{\mathrm{T}}$ .. .. | $\mathrm{D}\overset{6}{\underset{4}{}}\ \overset{5}{\underset{3}{}}\ \overset{3}{\mathrm{T}}$ |

S .. T | $\underset{3}{\mathrm{S}}$ $\underset{5}{\mathrm{T}}$ .. | D $\overset{6}{\underset{4}{}}$ .. $\overset{5}{\underset{3}{}}$ .. | T (𝄐)

(31) $\frac{2}{4}$: T D | T D | T S | T S | T S | T .. | D $\frac{6}{4}$ $\frac{5}{3}$ | T

etc

(32) $\frac{3}{4}$: T D | T D | T S | T D | T .. | S .. | T D | T

etc

MINOR.

(33) $\mathbf{C}$: mT | mD | mT .. | mS .. | mT mD |

mT mS | mT .. | mS .. | mT (𝄐)

(34) $\frac{4}{4}$: mS .. | mT .. .. | mS mT mD | mT mS .. | mT

etc

(35) $\frac{3}{4}$: mS | mT .. | mD .. | mT mS | mT (𝄐)

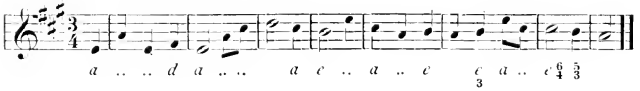
mD .. | mT mS | mT mS | mT (𝄐)

(36) $\frac{2}{4}$: mT ... | mS .. .. | mT mD .. | mT mS .. | mT

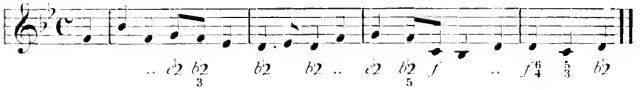
etc

MAJOR.

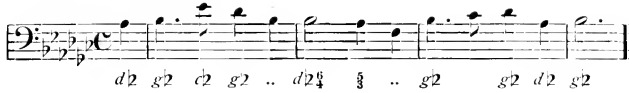
(37) Soprano given.



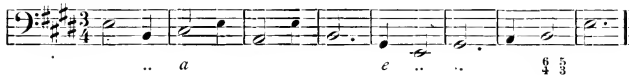
(38) Alto given.



(39) Tenor given.

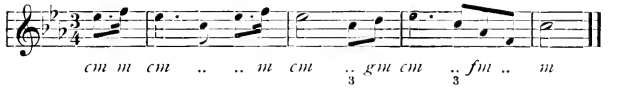


(40) Bass given.

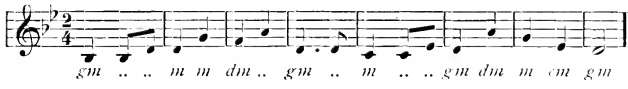


MINOR.

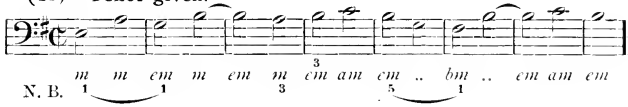
(41) Soprano given.



(42) Alto given.

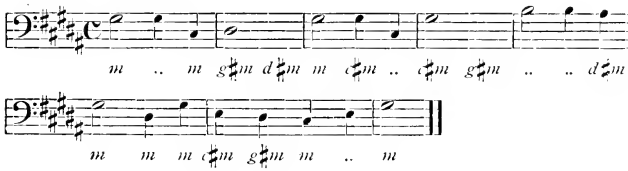


(43) Tenor given.



N. B.

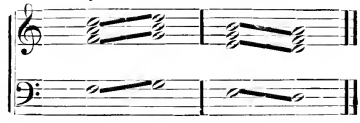
(44) Bass given.



N. B.—In the first measure of Exercise 43 a tie has been used to indicate that the bass note e is to be held out. The e is also a member of the second chord. This method of marking will be found very useful in indicating and explaining in a simple way the most complicated formations of the so-called *Pedal-point* (organ-point).

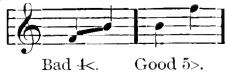
§ 22. **WHOLE-TONE STEP.** (Major to major chord, S—D; minor to minor, mD—mS). Because these two chords have no tone in common, they bring the risk of consecutive fifths and octaves.

Ex. 19.



The very simple way of avoiding consecutive fifths and octaves is to use contrary motion, but then all the parts can not move by half or whole-tone steps. Employ the leading tone (half-tone) step wherever possible; it will help to lead the other parts into their proper paths.

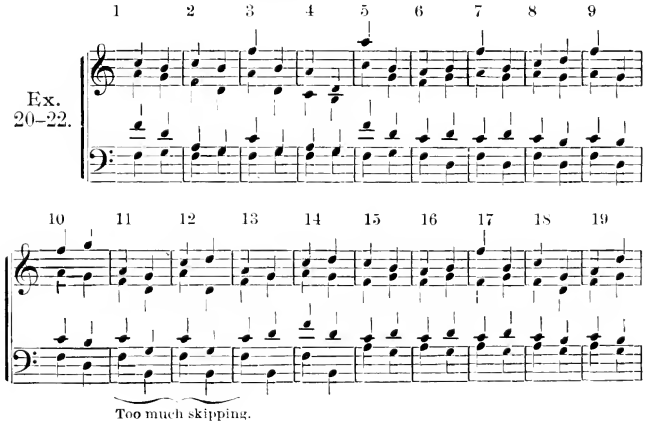
Another difficulty to be met in this chord connection is the *augmented fourth*, or *tritone* (three whole tones).

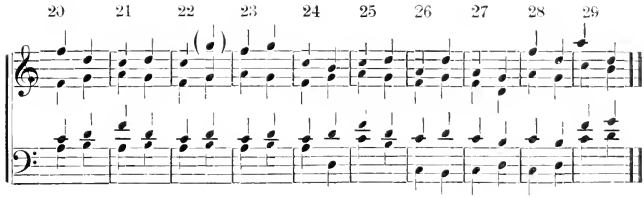


This skip occurs in going from S^1, to D^3, or mS^3 to mD^5. If written as a *diminished fifth* it is good. Augmented intervals are difficult to sing when the harmonies change, and for this reason are to be avoided. When a chord possessing these notes is sustained this progression is allowed, but as we use no such chords for the present, augmented intervals are forbidden without any exception.

EXAMPLES IN MAJOR.

Ex. 20–22.

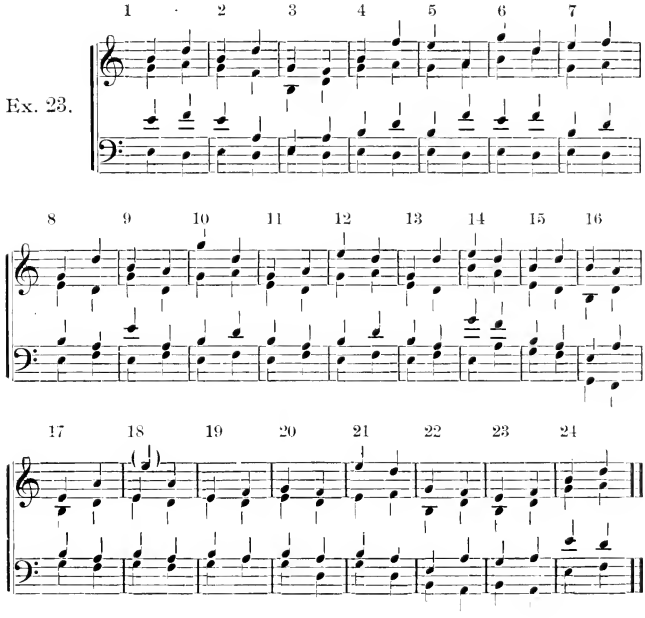




At Nos. 6–10 in the preceding example the bass part skips to the fifth of the dominant, but in this chord connection it must often be permitted for want of better ways. Besides, the D *in any position* after the S will define (indicate) the key accurately. The six-four chord ($D\frac{6}{4}$) will be found the natural connecting link between the two dominants.

EXAMPLES IN MINOR.

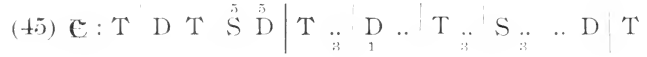
Ex. 23.



In order to accustom the student to reading score the next exercises ought to be worked out on *four staves;* every part is to be written on a separate staff. All notes above the middle line should have their stems turned downwards, all lying below turned upwards; for notes on the middle line either way is good.

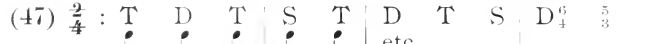
EXERCISES.

MAJOR.

(45) 

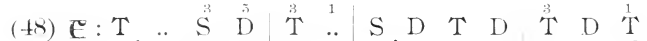
(46) 

(47) 



(48) 

(49) 

(50) 

MINOR.

(51) 

(52) 𝄵 : $\overset{5}{m}D \mid \overset{1}{m}S \quad mD \mid mT \quad .. \mid \overset{1}{m}D \quad \overset{1}{m}S \mid$

$mT \quad \underset{3}{\overset{5}{..}} \mid \overset{1}{m}D \quad \overset{1}{m}S \mid mT \quad \overset{3}{m}D \mid mS \quad .. \mid mT$

(53) $\frac{3}{8}$: mT mD | mT mS | mT $\overset{1}{m}D$ $\overset{5}{m}S$ | mT mS |

mT mS mT | $\overset{1}{m}D$ $\overset{5}{m}S$ .. | mT .. mS | mT | ..

(54) $\frac{2}{4}$: mT | .. $\overset{3}{m}D$ | .. $\overset{3}{m}S$ | .. .. | mT .. |

etc

mS mT | mD $\overset{3}{..}$ | $\overset{5}{m}S$ .. | mT

(55) $\frac{3}{4}$: mT mD | mT .. mS | mT mD mS | mT .. mS |

etc

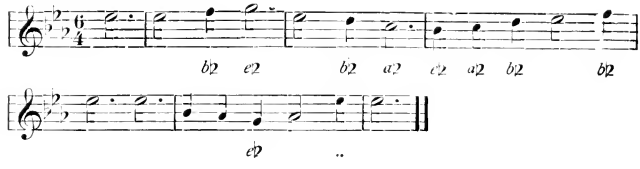
$\overset{3}{m}T$ .. mD | mS mT $\overset{3}{m}D$ | $\overset{3}{m}S$ .. .. | mT | ..

(56) $\frac{3}{4}$: n D mT mS | mT $\overset{1}{m}D$ $\overset{3}{m}S$ mT |

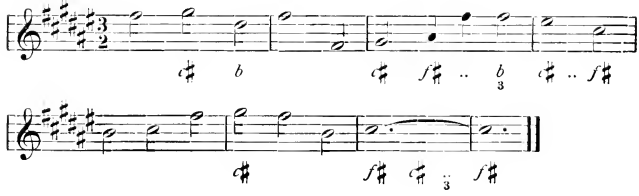
mS mD mT mD | mT $\overset{5}{m}D$ $\overset{5}{m}S$ .. | mT (

MAJOR.

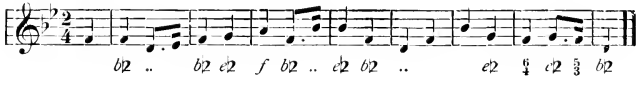
(57) Soprano given.



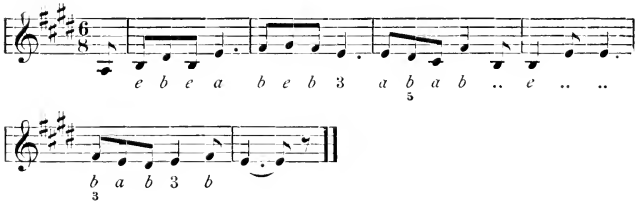
(58)



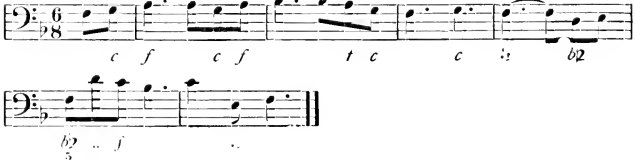
(59) Alto given.



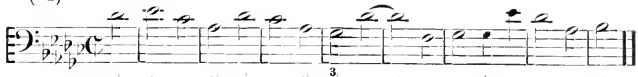
(60)



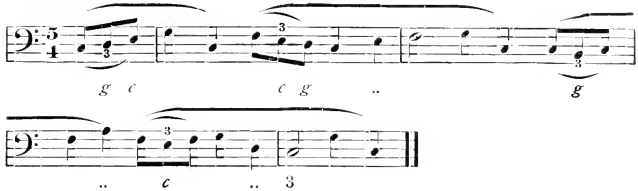
(61) Tenor given.



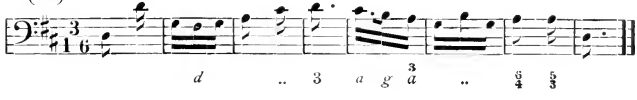
(62)



(63) Bass given.

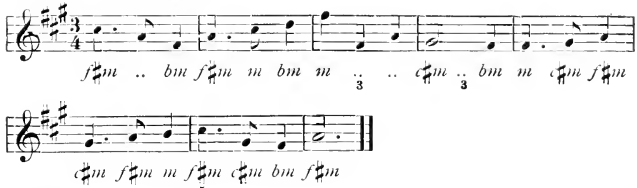


(64)

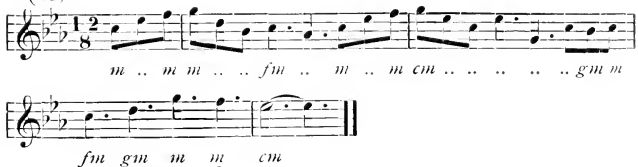


MINOR.

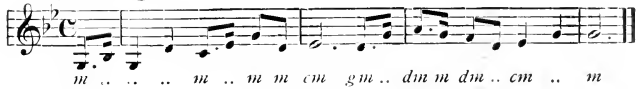
(65) Soprano given.



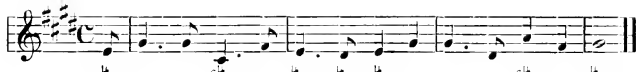
(66)



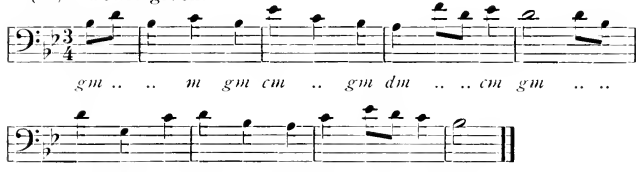
(67) Alto given.



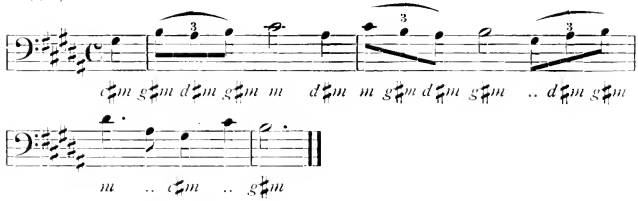
(68)



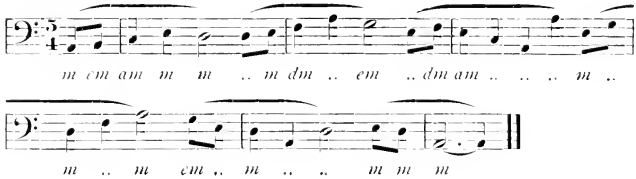
(69) Tenor given.



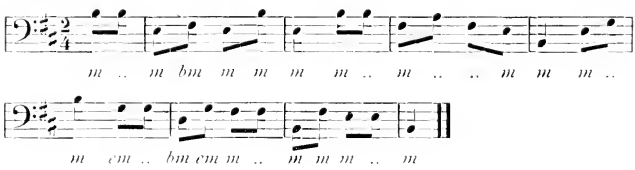
(70)



(71) Bass given.

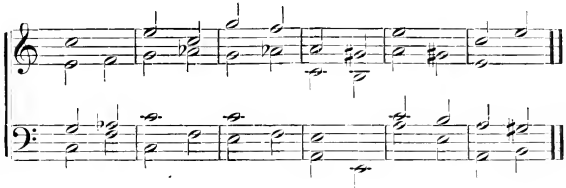


(72)



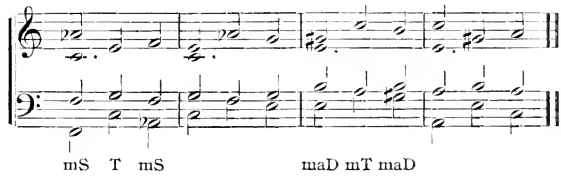
§ 23. **FOURTH STEP.** (Major to minor, T—mS; minor to major, mT—maD). There are no particular difficulties to be met in this chord connection; instead of one leading tone (half-tone) step there are two possible.

Ex. 24.

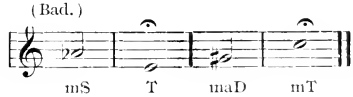


In progressing from the 3 of one to the 3 of the other chord avoid the augmented fifth (5<). Its inversion as diminished fourth (4>) is good, when a turning half-step follows.

Ex. 25.



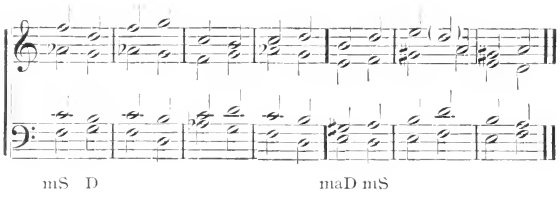
When the turning half-step does not follow then the diminished interval is not good, consequently the 4> must not be used in closing an exercise (or piece).



The six-four chord of the major dominant of the minor key must have a "minor" sixth (6>), the tone corresponding to the third of the mT. It is shown in the figuring by a > attached to the 6, which means that the sixth has to be lowered a half-tone, $D\frac{6}{4}>$. $e\frac{6}{4}> = e\ a\ c$, $e\frac{6}{4} = e\ a\ c\sharp$. The $D\frac{6}{4}>$ can act like a mT and have the same changed resolutions as the $D\frac{6}{5}$ in Ex. 17 on page 25.

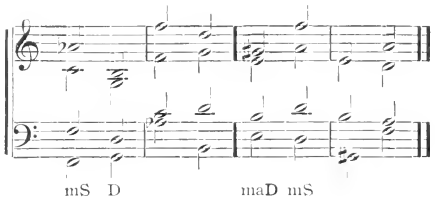
§ 24. **WHOLE-TONE STEP.** (minor to major, mS—D; major to minor, maD—mS). In connecting these chords we find two half-tone steps, otherwise the same difficulties (consecutive octaves and fifths) as in the whole-tone step where both chords are of the same mode (§ 22).

Ex. 26.



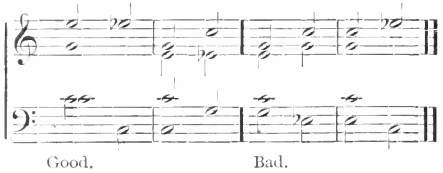
But besides the tritone step we find another obstacle, namely, an augmented second (2<); written as a diminished seventh (7 ·) it is good.

Ex. 27.



§ 25. **CHANGE OF MODE (OF CHORDS).** (S—mS, mD—maD). In this connection the chords have two tones in common, the other tones are a chromatic half-tone step apart. It is obligatory that the chromatically altered tones are kept in the same part, otherwise the ear is not able to perceive the change of harmony, and made to believe that the same harmony is repeated, but the chromatic tone only out of tune. This disagreeable effect is known under the name of *false relation* (*cross-relation*).

Ex. 28.



The actual effect of bad relation is felt only in this change of mode of chords, and not in other chord connections.

EXERCISES.

MAJOR.

(73) $\frac{2}{4}$: T | S mS | T .. | D .. | mS D | T .. |

D T | mS D | T

(74) $\frac{3}{8}$: ‖ : T | mS .. D .. | T mS T |

1 2

mS .. T mS | D : ‖ D .. | T

(75) 𝄵 : T .. D | T .. S mS | T mS D T | S mS D^{6}_{4} | T

etc.

MINOR.

(76) $\frac{3}{2}$: mT mD mT mS mT mD maD | mS mD mS .. |

D^{5}_{3} $^{6}_{4}$ $^{5}_{3}$ | mT mS mT D | mT mS mT |

D^{6}_{4} mS D .. | mT

(77) 𝄵 : mT mS | D .. | mS mT | mD maD | mS D |

mS .. | D^{6}_{4} $^{5}_{3}$ | mT

(78) 𝄵 : mS mD maD | mT mD mT | mS mT .. |

etc.

maD mS mT

§ 26. **MODULATION** is a change of key. It occurs whenever a new chord is made the central point of the tonal system. We break the bounds of the key, when we change the functions of harmonies, that is, when we treat any one of them as having a new meaning. In the following exercises a modulation (change of meaning of one function to another) takes place wherever the sign of equality (=) is.

The author's Revolving Chart of Harmony, No. 1, will be a great help to the student in learning and the teacher in illustrating Harmony, especially Modulation. It shows the different positions (functions) any chord can have in the various keys, because by merely turning the disc to any key desired the chords belonging to it can be seen at a glance, and the changes of functions be observed.

EXERCISES. (Modulating).

(79) C : T | mS maS | D T | D^{6}_{4} $^{5}_{3}$ | T .. = S | D T |

S mS | D^{6}_{4} $^{5}_{3}$ | T — D mS | T S | mS T | D mS

maS D | T S | mS D | T | ..

(Modulation to the key of the D and back).

(80) $\frac{3}{4}$: T .. | .. D S D | T D T = D S | D^{6}_{4} S D^{5}_{3} |

T .. .. = S D | T D T .. S D T .. mS D^{6}_{4} $^{5}_{3}$ | T

(Modulation to the key of the S and back).

(81) C : mT mS | D mD mS | mT .. mD mS

etc.

mT D^{6}_{4} $^{5}_{3}$ | mT .. = mS maD | mT mD mS | mT .. ..

mS D^{6}_{4} $^{5}_{3}$ | mT

(Modulation to the key of the mS and back).

(82) $\frac{3}{2}$: mT .. mD | mT $\underset{3}{\text{mS}}$ $\underset{1}{\text{mT}}$ = mS | D mT mS |

mT = mD .. | mS $\underset{1}{\text{mT}}$ mS | mT mD mT |

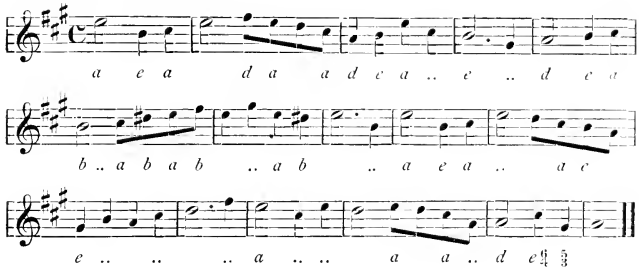
mS D $\frac{6}{4}$ $\frac{5}{3}$ | mT (𝅗𝅥 ·

(Modulation to the key of the mD and back).

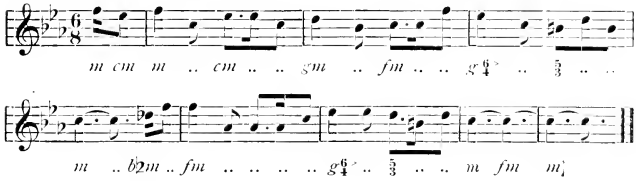
In the following exercises the pupil is to find the modulations and indicate the changes of functions taking place.

EXERCISES.

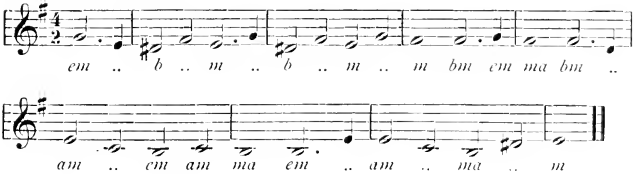
(83) Soprano given.



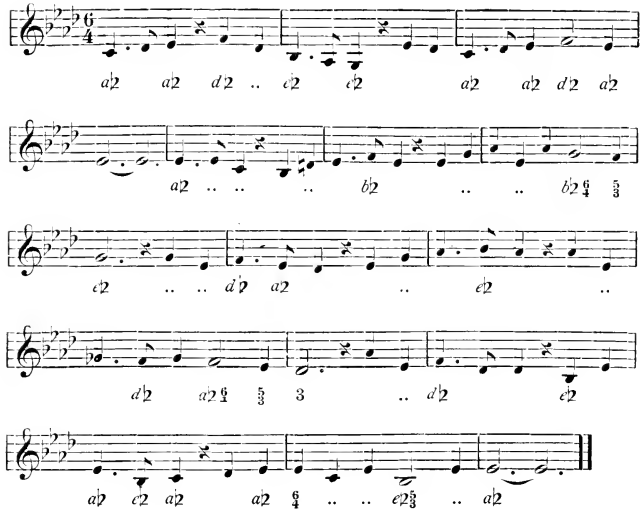
(84)



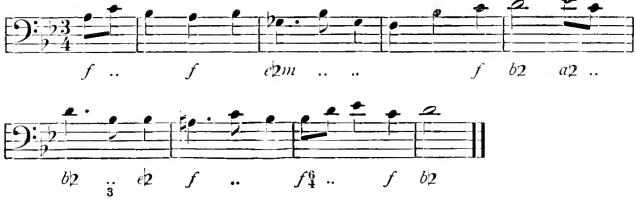
(85) Alto given.



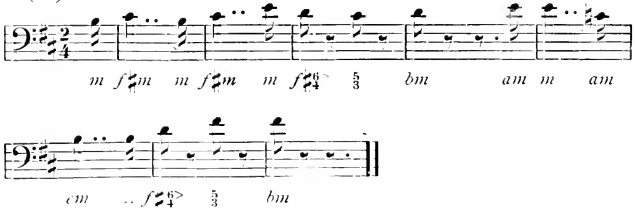
(86)



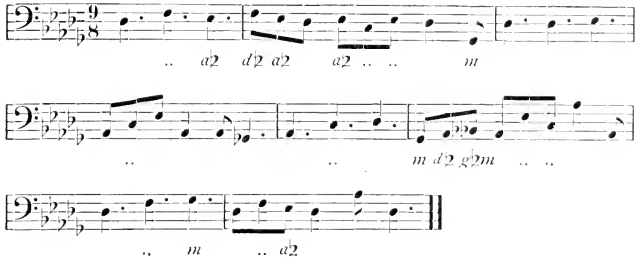
(87) Tenor given.



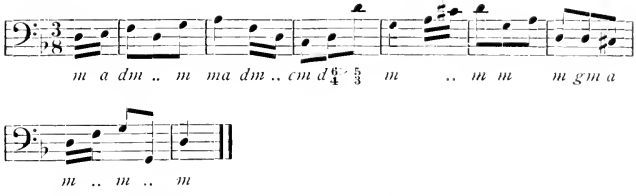
(88)



(89) Bass given.

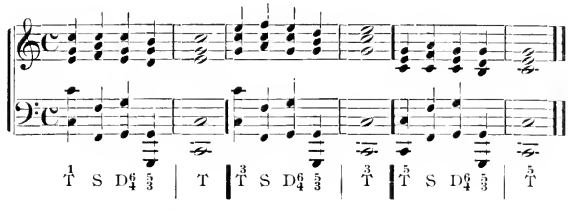


(90)

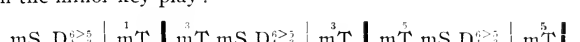


§ 27. **PRACTICAL WORK ON THE PIANO.**—Cadences are no musical pieces, nevertheless they are the types of harmonic motion, and consequently very important. The student ought to play all major and minor cadences on the piano according to the following pattern:

Ex. 29.



In the minor key play:

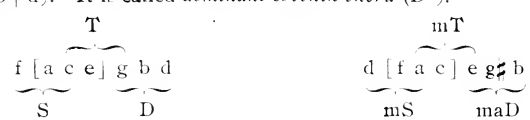


It would be an excellent practice now, to review all the exercises by working out and playing them on the piano *at sight*. It ought to be tried, because the pupil's harmonic knowledge and ability should be at his finger's ends.

CHAPTER III.

THE PRINCIPAL DISCORDS.

§ 28. THE PRINCIPAL DISCORDS. (D^7, S^6, mS^6, mD^7). Before we will acquaint the student with other concords of the key, we will explain the almost indispensable principal discords of the key. They are the dominants with additional tones, which help to mark them very pointedly as S or D. These added tones are tones borrowed from the other dominant. The Major Over-dominant adds the prime of the subdominant (in C-major, g b d | f; in A-minor, e g♯ b | d). It is called *dominant seventh chord* (D^7).



The Major Subdominant adds the fifth of the dominant (in C-major, f a c | d).

It is called *subdominant sixth chord* (S^6).

The Minor Subdominant adds the fifth of the *minor* or *major* overdominant (in A-minor d f a | b; in C-major f a♭ c | d).

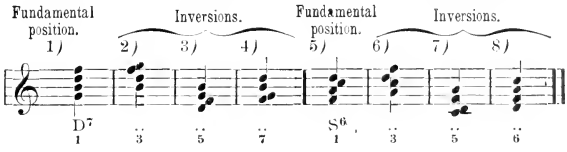
It is called *minor subdominant sixth chord* (mS^6).

The Minor Over-dominant adds the prime of the minor subdominant (in A-minor, e g b | d).

It is called *minor dominant seventh chord* (mD^7).

Adding a tone of one dominant to the dominant lying on the other side circumscribes the key in the same way as does the succession of two dominants—it points to their tonic.

CHORDS OF THE D^7 AND S^6 AND THEIR INVERSIONS.

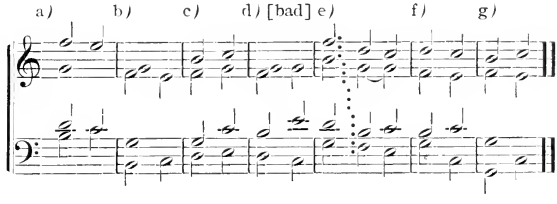


The old thorough-bass figuring would count the intervals of all chord formations from the lowest tone upwards and call No. 1 seventh chord (7), No. 2 chord of five-six ($\frac{6}{5}$), No. 3 chord of three-four ($\frac{4}{3}$), No. 4 chord of the second (2), No. 5 chord of the five-six ($\frac{6}{5}$), No. 6 chord of the three four ($\frac{4}{3}$), No. 7 chord of the second (2), and No. 8 chord of the seventh (7). We do not need nor use all these terms.

EXERCISE.—Write the principal discords (D^7, S^6, mS^6 and mD^7) of all major and minor keys.

§ 29. THE RESOLUTIONS OF THE DOMINANT SEVENTH CHORD.

Ex. 30.

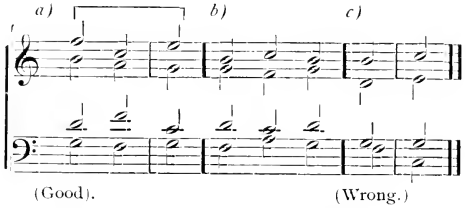


The seventh always moves by step of a second. It generally moves downwards and makes the leading tone (half) step, Ex. 30, a and b. Tones forming the interval of a second strive away from each other [b]. Merging the one tone into the other [d] is of good effect only in case it is produced by instruments (and voices with instruments) of strongly contrasting tone-colors. The pupil should avoid this resolution. The upward motion of the seventh [c] is allowed only when the downward motion would cause doubling of the third. Where the same harmony is repeated, the seventh may change places with some other tone; in Ex. 30, e, the rule for progression is merely transferred to the bass. At b and g the fifth in the chord of the seventh has been omitted. We know that the fifth of any chord can be omitted; here it was done to have the tonic chord after it complete [with fifth, g]. If we have the D^7 complete [f] then the subsequent tonic will be incomplete [without fifth]. If we think the *g c* given for the tenor, and the 3 called for as bass note in T, then a downward motion of the seventh would create a faulty

third-doubling, because doubling both prime and third in four-part writing is considered very harsh. Third-doubling is good only when the chord is complete; it is better to treble the fundamental note.

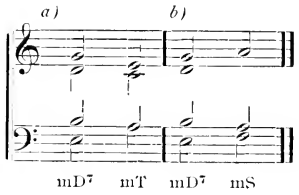
It is impossible to have the seventh as bass note for the second last chord, because the prime of the tonic is required for the bass, whereas the seventh has to make the half-tone step to the third, Ex. 31, c. When the D^7 is not followed by the tonic, but by the S, the seventh need not progress by step of second, although this will usually happen afterwards, Ex. 31, a, b.

Ex. 31.



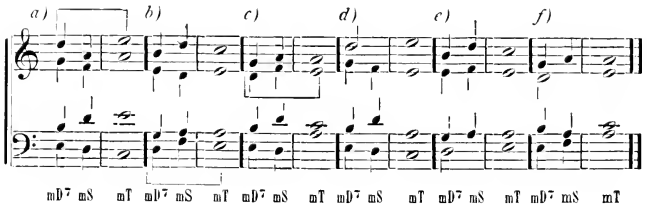
The mD^7 progresses like the maD^7, Ex. 32, a. But when the seventh becomes part of the mS, it, of course, need not move, Ex. 32, b.

Ex. 32.



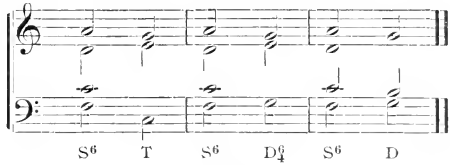
The resolution of the mD^7 may be disguised by means of intermediate tones.

Ex. 33. A



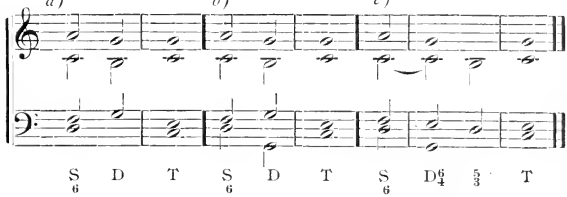
§ 30. THE RESOLUTIONS OF THE SUBDOMINANT SIXTH-CHORD.—In this chord the sixth, when sounded together with the fifth, must strive towards the seventh, or force the fifth to the fourth, because tones of a second strive away from each other (no matter whether in the same octave position or not).

Ex. 33. B



When in the C-major cadence the G (d) of the S⁶ chord is in the bass, and the D follows, the d can be sustained [Ex. 34, a], although it is not necessary. The d can proceed first to g of the D and then to c of the T [Ex. 34, b], and even the D⁶₄ may be also inserted [Ex. 34, c].

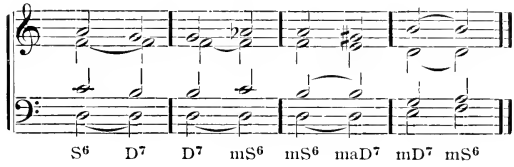
Ex. 34.



In the last two cases [b c] the S⁶, with the sixth in the bass, *acts* like a D⁷ of the D, with the prime in the bass. Why the chords of the sixth readily take just the dissonant tone for the bass will be quite clear to us later on, when we will have to consider *dominants of the dominants* and the possibilities of chromatic alterations of chords. As soon as the 1 is raised the S⁶ becomes D⁷ of the D, likewise the mS⁶ as soon as the 1 and 3 are raised; but the sixth has become the prime (fundamental).

The use of added (dissonant) tones with the dominant chords lessens the danger of consecutive fifths and octaves considerably, as it gives to chords which otherwise have no tone in common, two such tones:

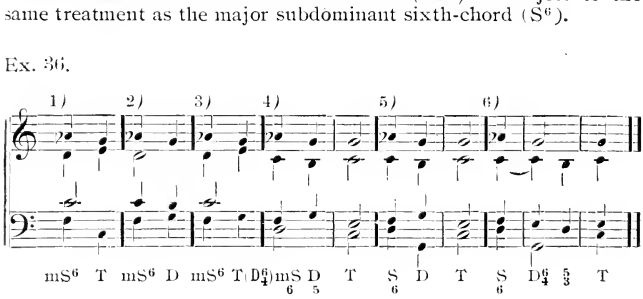
Ex. 35.



As regards the figuring of the exercises, we must explain that the 6 or 7 *beside* the chord-sign (T, D, etc., or chord-letter c, g, etc., or ..) simply asks for the chord of the sixth or seventh. Numbers *above* or *below* the signs tell what particular tone is to go in the *highest* or *lowest* part.

The *minor* subdominant sixth-chord (mS^6) is subject to the same treatment as the major subdominant sixth-chord (S^6).

Ex. 36.



§ 31. FIGURATION.—We will take another step forward in the next exercises by practicing the simplest forms of *figuration* or ornamentation, that is, we let one part move in shorter notes (half the value) than the others. We will make use of only the following three varieties:

(A) *Passing tones*, which fill in the gaps between an interval of a third; for example, if the unfigured part had e and g in succession, then f (or f♯) would be the passing tone.

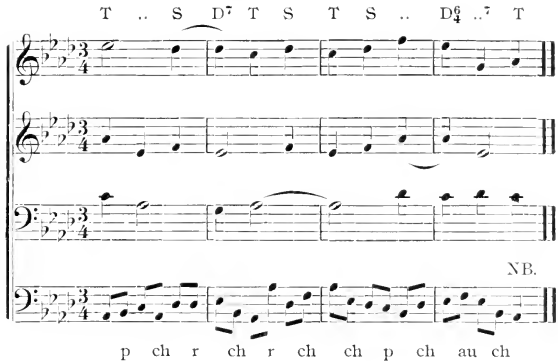
(B) *Auxiliary tones.* The insertion of a neighbor-tone (a whole or half-step) above or below where the unfigured part uses the same tone twice in succession (c *b* c, c *b*♮ c, c *d* c, c *d*♯ c).

(C) *Chord tones.* In cases where neither of the above can be applied, a second note of the chord may be inserted. For example, in the figuration of the C-major chord g might be used between e and c^1. Occasionally a leap to the octave might be made, or even the same note repeated.

Figuration increases the danger of faulty parallel progressions, because the inserted tone may produce consecutives which were not in the unfigured writing. Avoid in figuration of the bass part skipping from the fifth of one chord to the fifth of another.

In the following illustration for figuration exercises we mark the inserted tones: p = passing tone, au = auxiliary tone, ch = chord tone, r = repeated chord tone. The bass is the part figurated.

Ex. 37.



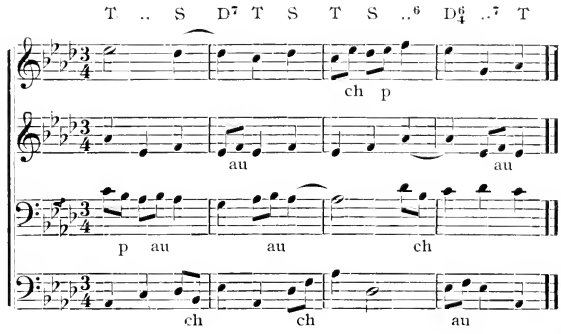
NB.—The closing chord is not figurated.

In figuration not only may the 7 be added to a D without being called for, but also, when mentioned in the figuring, it enters soon enough, when introduced by the inserted tone. The same holds good of the 6 of the S or mS. These tones may be used in the figuration where not called for, and, where they are called for, may be missing at first and be added afterwards as figuration tones. When by .. a chord with an added dissonant tone is required to be repeated, that tone may be dropped, for it is not necessary to use it again.

A pleasing variety of this exercise is that of not keeping the figuration in one part, but of changing it to any part possible of having passing and auxiliary tones, using chord tones only when necessary.

Divided figuration.

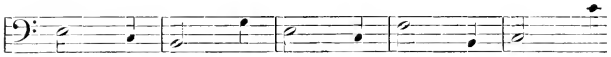
Ex. 38.



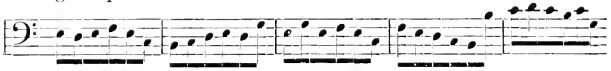
§ 32. **MODULATION** (CONTINUED). In the following exercises a few more ways of modulation have been employed, namely, the change of meaning of a chord by the addition of the dissonant tone essential to its new meaning. In Nos. 91 and 92 the tonic changes to subdominant on account of the sixth characteristic for the subdominant being added. In No. 93 the T is made a D^7 by the addition of the 7. In No. 95 the mT is stamped as a mS, because the 6 is added to it. Another way of modulating is to chromatically alter the third of the T. The raising of the third of a minor tonic gives the resulting major chord the meaning of an overdominant (No. 96); the lowering of the third of a major tonic gives the resulting minor chord the meaning of a subdominant (No. 93).

Where it happens that the part for figuration has half and quarter notes mixed, and the figuration is to be in eighth notes, more than one intermediate note will have to be introduced where there are half notes, without, however, going beyond the resources mentioned. The following will sufficiently explain how to proceed:

Part for figuration:



Figured part:



The auxiliary tones on both sides will have to be used, and skips into octaves will have to be made.

Work the exercises with figuration for soprano, alto, tenor and bass parts, and then with divided figuration.

EXERCISES. (For figuration).

All in eighth notes.

(91) $\frac{2}{4}$: T | S^6 D $..^7$ | T mS | T $\overset{6}{..}$ = S^6 D^7 | T mS | $D^{6\ 5}_{4\ 3}$ |

T $..^7$ = D^7 | T $\overset{3}{..}$ $..$ | S^6 D^7 | T

(92) $\frac{3}{4}$: S^{6} D^{7} | $\underset{3}{\text{T}}$ mS^{6} T | D T = D S | T S^{6} $\underset{6}{..}$ |

D T $\overset{6}{..}$ = S^{6} | D $\underset{3}{\text{T}}$ D | T S mS^{6} | $\underset{6}{..}$ D$^{6}_{4}$ ..^{7} | T (𝄾)

(93) 𝄴 : T D mS T ..^{7} = D^{7} T S D | T $\overset{3>}{..}$ = mS T D |

T mS^{6} D$^{6}_{4}$ $^{5}_{3}$ | T

(94) 𝄴 : mT mD^{7} | mS^{6} D$^{6>}_{4}$ $^{5}_{3}$ | mT ..^{7} = mD^{7} mS^{6} |

mT D$^{6>}_{4}$ $^{5}_{3}$ | mT ..^{6} = mS^{6} | $\underset{3}{\text{mT}}$ $\underset{5}{..}$ |

mS^{6} maD^{7} | mT (𝄽)

(95) $\frac{3}{4}$: mT | mD mS^{6} maD^{7} | mT ..^{6} = mS^{6} |

D ..^{7} mT | maD mT ..^{7} = mD^{7} | mS D$^{6>}_{4}$ $^{5}_{3}$ |

mT mS ..^{6} | $\underset{6}{..}$ D$^{6>}_{4}$ ..^{7} | mT (𝄾)

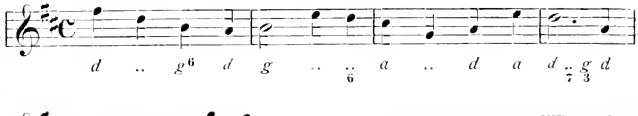
(96) 𝄴 · mT mS maD | mT ..^{6} = mS^{6} D$^{6>}_{4}$ $^{5}_{3}$ |

mT ..$^{3<}$ = maD mT maD | mT mS^{6} D$^{6>}_{4}$ $^{5}_{3}$ | mT (𝅗𝅥)

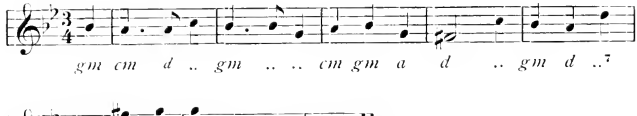
EXERCISES. (Not for figuration).

(The tonal functions are to be added in working out).

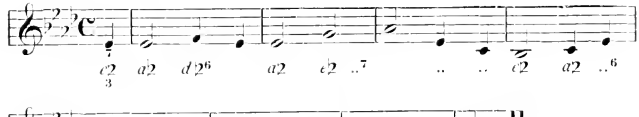
(97) Soprano given.



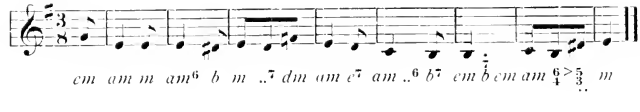
(98)



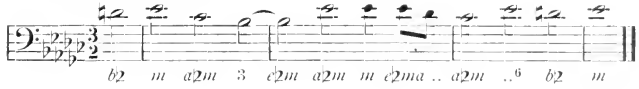
(99) Alto given.



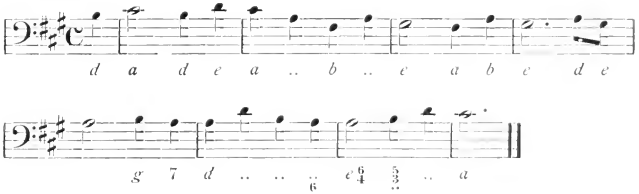
(100)



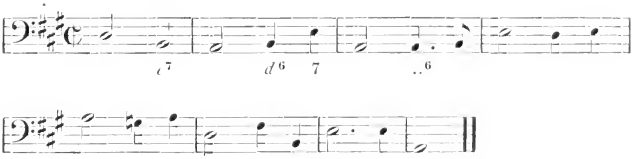
(101) Tenor given.



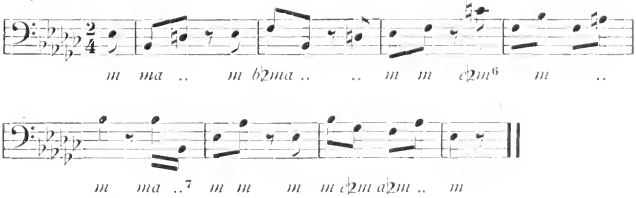
(102)



(103) Bass given.



(104)



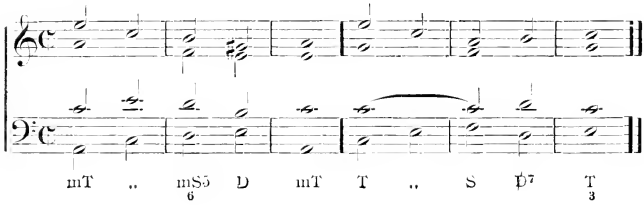
§ 33. "DIMINISHED" TRIAD. In the simple concord of three tones we might occasionally omit one note, the fifth. It is still more easily done when a fourth (dissonant) tone is added to the chord. On page 45 (Ex. 30, b and g) we omitted the fifth in the dominant seventh chord in order to have the following tonic chord complete.

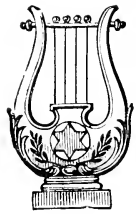
We can also omit the fifth in the mS^6 chord. The three remaining tones, d f b, of this chord, when put in this order, b d f, form

the so-called "diminished" triad, because from b to f is a diminished fifth. The only tone to double is always the prime (d), because the dissonant tone (6) may not be doubled. We indicate this chord by striking through (cancelling) the fifth (5); b d f = dm^{5}_{6} (mS^{5}_{6}).

If we omit the prime in D^{7} (g b d f) we find another diminished triad. The note that is permitted to be doubled is the fifth; the dissonant tone (7) may not be doubled. We express the omission of the prime by striking through the letter; g^{7} = b d f ($\not{D}^{7}$).

Ex. 39.





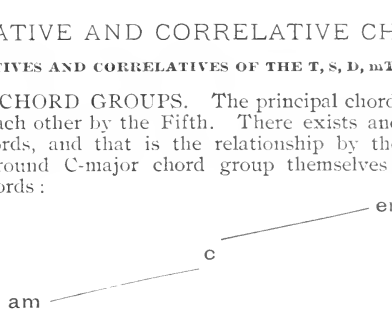
PART II.

CHAPTER IV.

RELATIVE AND CORRELATIVE CHORDS.

(A. RELATIVES AND CORRELATIVES OF THE T, S, D, mT, mD AND mS.)

§ 34. CHORD GROUPS. The principal chords of a key are related to each other by the Fifth. There exists another relationship of chords, and that is the relationship by the Third. For example, around C-major chord group themselves A-minor and E-minor chords:



We call A-minor chord the relative chord of C-major. E-minor is also a relative chord of C-major, but to distinguish it from the other relative chord (A-minor), we will call it the *correlative chord* of C-major. When the principal chord is major then the relative and correlative chords are always minor. The relative chord is situated a minor third below the prime of the principal (major) chord, and contains the prime and third of the latter.

Relative chord.	e c a	g e c	Principal chord.

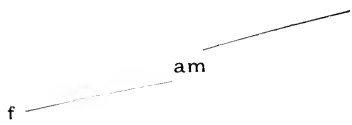
The correlative chord is situated a major third above the prime of the principal (major) chord, and a fifth above the relative chord. The correlative contains the third and fifth of the principal chord.

Principal chord.	g e c	b g e	Correlative chord.

The Dominant and Subdominant chords are a whole tone step (double fifth step f—c—g) apart, and move around the Tonic as their central point. The relative and correlative chords imitate this relationship within a smaller circle, they are only a fifth step apart; move around their principal chord, and can be used as substitutes for it.

EXERCISE. — Find and write the relative and correlative chords of all major chords.

Around A-minor chord group themselves C-major and F-major chords.



Here we find another proof that major and minor are opposites in all things. It has already been stated that when the principal chord is major, then the relative and correlative chords will be minor, consequently when the principal chord is minor then the relative and correlative chords will always be major. With the major chord we found the relative chord situated a minor third below, here the relative of a minor chord is situated a minor third *above* the principal (minor) chord. C-major is the relative chord of A-minor chord. It contains the third and fifth of the principal chord.

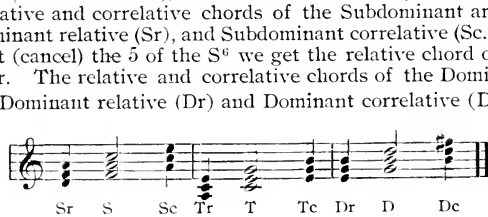
Principal chord. { e, c, a } . . . . . { g, e, c } Relative chord.

The correlative chord is a major third below the principal (minor) chord, and a fifth below the relative chord. F-major is the correlative chord of A-minor chord. It contains the prime and third of the principal chord.

Principal chord. { e, c, a } . . . . . { c, a, f } Correlative chord.

EXERCISE.—Write the relative and correlative chords of all minor chords.

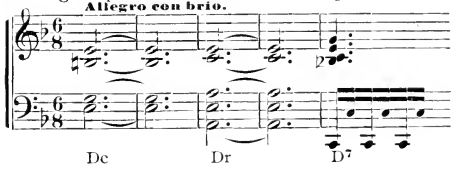
§ 35. THE RELATIVES AND CORRELATIVES OF THE PRINCIPAL CHORDS (T, D, S,) OF THE MAJOR KEY. The relative and correlative chords of the Tonic are named Tonic relative (abbreviated Tr,) and Tonic correlative (abbreviated Tc.) The relative and correlative chords of the Subdominant are named Subdominant relative (Sr), and Subdominant correlative (Sc.) When we omit (cancel) the 5 of the S^6 we get the relative chord of the S, $S^6_5 = Sr$. The relative and correlative chords of the Dominant are named Dominant relative (Dr) and Dominant correlative (Dc).



In writing, the Dc requires an accidental, nevertheless it belongs to the key, and is used as the following illustration shows:

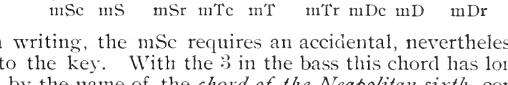
Edvard Grieg. Op. 8. Sonata for violin and piano.

Ex. 40.



The student will notice that the Sc and Tr, the Tc and Dr are represented by the same chord. A chord can have two relationships, just like one and the same man can be a brother to one person and a son of another, or like one man can hold two offices. In Harmonic analysis refer generally the relationship of a chord to the one that precedes it, for example, call the A-minor chord a Sc when it follows the F-major chord (S), but when it follows the C-major chord (T), then call it Tr.

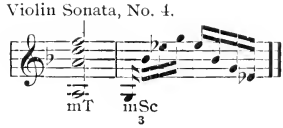
§ 36. THE RELATIVES AND CORRELATIVES OF THE PRINCIPAL CHORDS (mT, mS, mD,) OF THE MINOR KEY. The relative and correlative chords of the minor Tonic are named minor Tonic relative (abbr. mTr) and minor Tonic correlative (abbr. mTc). The relative and correlative of the mS are the minor Subdominant relative (mSr) and the minor Subdominant correlative (mSc). The relative and correlative chords of the mD are the minor Dominant relative (mDr) and the minor Dominant correlative (mDc). When we omit (cancel) the prime of the mD^7 we get the relative chord of the mD, $mD^7 = mDr$.



In writing, the mSc requires an accidental, nevertheless it belongs to the key. With the 3 in the bass this chord has long been known by the name of the *chord of the Neapolitan sixth*, consisting of a minor third and minor sixth, and situated on the prime of the mS. It is said to have been brought into use by the opera composers of the Neapolitan school (Alessandro Scarlatti, 1649—1725, and pupils).

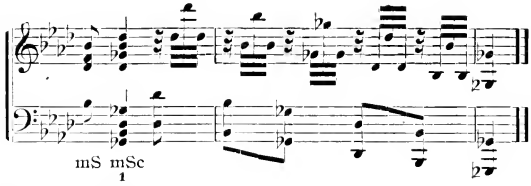
Bach. Violin Sonata, No. 4.

Ex. 41.



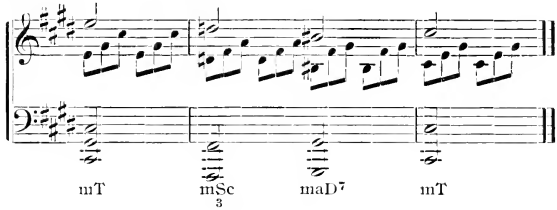
Haydn. Andante varie. F minor.

Ex. 42.



Beethoven. Op. 27, No. 2. Sonata.

Ex. 43.



The functions of mSr and mTc are held by the same chord, and so are mTr and mDc.

§ 37. CLASSIFICATION OF CHORD CONNECTIONS (Continued). The principal chords and their relatives and correlatives make possible the following chord connections, some of the classes have been met before, for example:

The Fifth step, § 18, IN MAJOR: Sr—Sc, Sr—Tr, Sc—Tc, Sc—Dr, Tr—Tc, Dr—Dc. IN MINOR: mDr—mDc, mDc—mTc, mDr—mTr, mTr—mTc, mDc—mSr, mSr—mSc.

The Fourth step, § 21, IN MAJOR: Dr—Tr, Dc—Dr. IN MINOR: mSc—mTc, mSr—mSc.

The Whole tone step, § 22, IN MAJOR: Sr—Tc, Sr—Dr, Sc—Dc, Tr—Dc. IN MINOR: mDr—mTc, mDr—mSr, mDc—mSc, mTr—mSc.

The new chord connections are:

The Minor Third step, ¾ 40. IN MAJOR, descending from major to minor chord. IN MINOR, ascending from minor to major chord.

The Third step, ¾ 41. IN MAJOR, ascending from major to minor chord. IN MINOR, descending from minor to major chord.

The Whole tone step, ¾ 42. IN MAJOR, ascending from major to minor chord. IN MINOR, descending from minor to major chord.

The Half tone step, ¾ 43. IN MAJOR, ascending from minor to major chord. IN MINOR, descending from major to minor chord.

The Fourth step, ¾ 44. IN MAJOR, ascending from minor to major chord. IN MINOR, descending from major to minor chord.

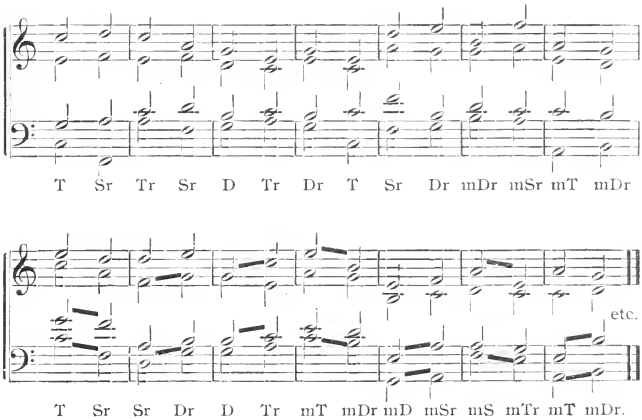
The Minor Third step, ¾ 45. IN MAJOR, from minor to minor chord. IN MINOR, from major to major chord.

The Tritone step, ¾ 46. IN MAJOR, ascending from major to minor chord. IN MINOR, descending from minor to major chord.

Because Minor is the opposite of Major, we have to figure the chord connections in it the opposite way we do in Major and from and to chords of the opposite mode in order to find the equivalent chord connections. The conditions for writing these progressions are given farther on.

§ 38. SPECIAL FEATURES OF RELATIVE AND CORRELATIVE CHORDS. The relative and correlative chords allow the doubling of any of their tones. Being derived from the **T**, the doubling of the third of a **Tr** would merely mean a doubling of the prime of the T, and point to the chord from which it is derived. Doubling the third of a Tc would be merely the doubling of the fifth of the T from which it is derived The same holds good of all the relatives and correlatives in the Major or Minor key. The doubling of the third of a relative or correlative can even occur in parallel motion.

Ex. 44.

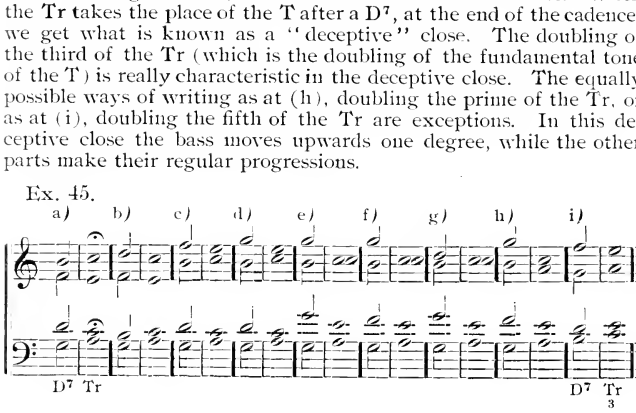


Proceeding by skip to the 5 of the relatives and correlatives should be avoided, because it produces the undesirable effect of six-four. In the cadence the natural position of the Tr is after the T, the Sr comes after the S, and the Dr after the D. The correlatives form a natural connecting link between the principals and their relatives.

EXERCISE.—Play the pure major cadences (T S D T) of all keys and insert the relatives and correlatives where they belong. Play the pure minor cadences (mT mD mS mT) and insert the relatives and correlatives where they belong.

§ 39. THE "DECEPTIVE" CLOSE IN THE MAJOR KEY. The relative and correlative chords partake somewhat of the nature of their principal chord. The Tr can certainly not have the exact meaning of the T, but it can be used as its substitute. When the Tr takes the place of the T after a D^7, at the end of the cadence, we get what is known as a "deceptive" close. The doubling of the third of the Tr (which is the doubling of the fundamental tone of the T) is really characteristic in the deceptive close. The equally possible ways of writing as at (h), doubling the prime of the Tr, or as at (i), doubling the fifth of the Tr are exceptions. In this deceptive close the bass moves upwards one degree, while the other parts make their regular progressions.

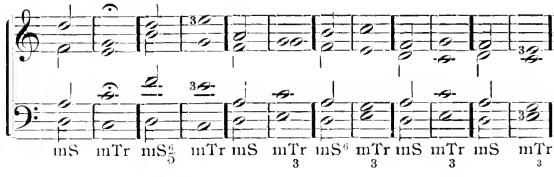
Ex. 45.



The 5 or 7 may be absent in the D. The distance of an octave between alto and tenor, as at (c), is allowed in all deceptive closes, when both pair of parts form thirds.

THE EQUIVALENT OF THIS MAJOR DECEPTIVE CLOSE is, in the minor key, from the mS to the mTr as follows (with or without the sixth to the mS):

Ex. 46.

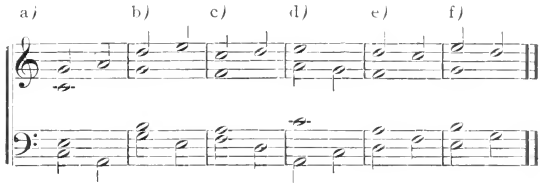


EXERCISE.—Write these deceptive closes in all keys.

§ 40. **MINOR THIRD STEP.** IN MAJOR, descending from major to minor chord: S—Sr, T—Tr or Sc, D—Dr or Tc. IN MINOR, ascending from minor to major chord: mD—mDr, mT—mTr or mDc, mS—mSr or mTc.

Connecting the relatives (and correlatives) with the principal chords, from which they are derived, causes no difficulties as the chords have two tones in common (the interval of the major third). The third part progresses a whole tone step, and the bass usually moves from prime to prime.

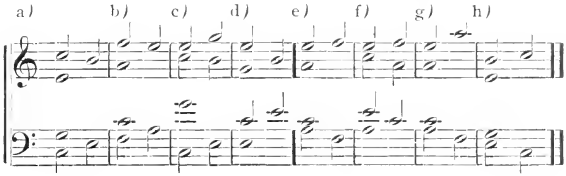
Ex. 47.



§ 41. **THIRD STEP.** IN MAJOR, ascending from major to minor chord: S—Sc or Tr, T—Tc or Dr, D—Dc. IN MINOR, descending from minor to major chord: mD—mDc or mTr, mT—mTc or mSr, mS—mSc.

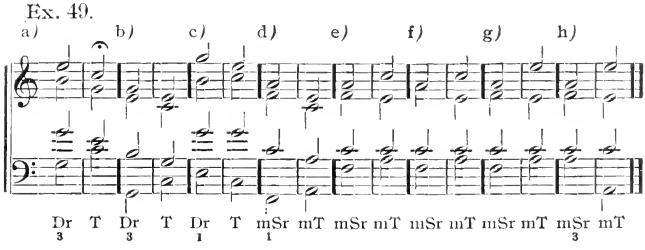
The chords have two tones in common, possess a leading tone (half step) and permit the doubling of the fundamental tones.

Ex. 48.



Exceptional leadings of parts are possible without violating any rules. This chord connection has a special meaning as closing step in place of the return fifth step, for example: Dr—T or mSr—mT instead of D—T and mS—mT. In order to put more vigor into the parts, they are then usually made to proceed by skip, especially in the major close. Schubert was very fond of this progression. It is also possible in the minor key.

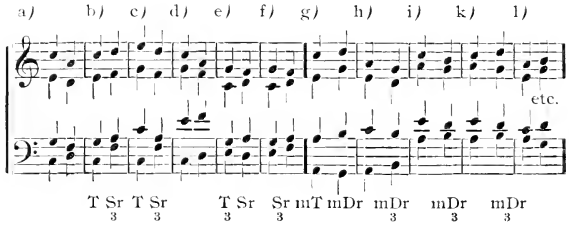
Ex. 49.



§ 42. **WHOLE-TONE STEP.** IN MAJOR, ascending from major to minor chord: T—Sr, D—Tr or Sc. IN MINOR, descending from minor to major chord: mT—mDr, mS—mTr or mDc.

The chords have no tones in common, therefore there is danger of consecutive fifths and octaves, which can be easily avoided, if the possible leading tone step is given up or the third doubled in the relative (or correlative) chord.

Ex. 50.

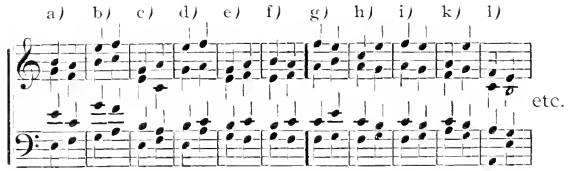


See also § 39, Ex. 46.

§ 43. **HALF-TONE STEP.** IN MAJOR, ascending from minor to major chord : Dr or Tc — S, Dc — T. IN MINOR, descending from major to minor chord : mSc—mT, mTc or mSr—mD.

This chord connection gives rise to some difficulties, namely, risks of consecutive fifths and octaves, tritone (augmented fourth). They can, however, be avoided.

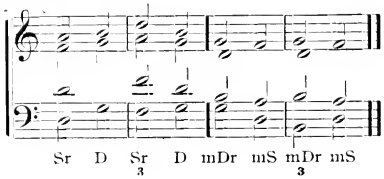
Ex. 51.



§ 44. **FOURTH STEP.** IN MAJOR, ascending from minor to major chord : Sr—D. IN MINOR, descending from major to minor chord : mDr—mS.

This chord connection has the same meaning as the whole-tone step (§ 22), without its dangers. Two parts move by whole-tone steps, and the bass usually moves from prime to prime. Because the relative is used as a substitute for the principal chord, it is very important for modulation.

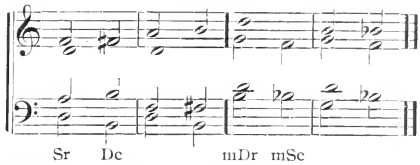
Ex. 52.



§ 45. **MINOR THIRD STEP.** IN MAJOR, from minor to minor chord: Sr—Dc. IN MINOR, from major to major chord: mDr—mSc.

This chord connection has a chromatic step, which observe.

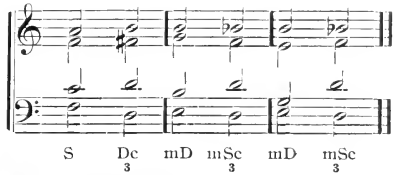
Ex. 53.



§ 46. **TRITONE STEP.** IN MAJOR, ascending from major to minor chord: S—Dc. IN MINOR, descending from minor to major chord: mD—mSc.

Contains one possible augmented step, which can be avoided if the chromatic or the leading tone step is observed.

Ex. 54.



§ 47. **MODULATION.** (Continued.) The use of relative and correlative chords opens up a surprisingly great number of modulations, as the following tables will show. From each key there are sixty-two modulations possible into six major and six minor keys.

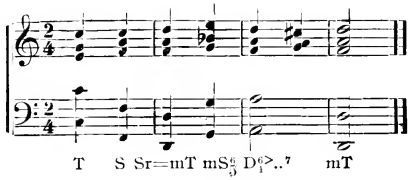
T = mTr	D = mTr	S = mTr	Tr = mT	Dr = mT	Sr = mT
" mSr	" mSr	" mSr	" mS	" mS	" mS
" mDr	" mDr	" mDr	" mD	" mD	" mD
" mTc	" mTc	" mTc	" Sr	" Tr	" Tr
" mSc	" mSc	" mSc	" Dr	" Sr	" Dr
" mDc	" mDc	" mDc	" Dc	" Sc	" Sc
			" Tc	" Dc	" Dc
					" Tc

Tc = mT	Dc = mT	Sc = mT	mT = Tr	mS = Tr	mD = Tr
" mS	" mS	" mS	" Sr	" Sr	" Sr
" mD	" mD	" mD	" Dr	" Dr	" Dr
" Tr	" Tr	" Sr	" Tc	" Tc	" Tc
" Sr	" Sr	" Dr	" Sc	" Sc	" Sc
" Sc	" Dr	" Dc	" Dc	" Dc	" Dc
" Dc	" Sc	" Tc			
	" Tc				

mTr = T	mSr = T	mDr = T	mTc = T	mSc = T	mDc = T
" S	" S	" S	" S	" S	" S
" D	" D	" D	" D	" D	" D
" mSr	" mTr	" mTr	" mTr	" mTr	" mSr
" mDr	" mDr	" mSr	" mDr	" mDr	" mDr
" mSc	" mSc	" mSc	" mDc	" mDc	" mSc
" mTc	" mDc	" mDc	" mSc	" mSr	" mTc
		" mTc		" mTc	

EXERCISE. — Study the tables by figuring out into what keys the change of functions will lead. An excellent practice is to play the cadences up to the chord changing its meaning, and then enter the new key with the chord indicated. Compare Part 1, § 27.

Ex. 55.



When the new key is entered by the D side, for example, mT, mS, mDr = D, then the modulation plunges too rapidly to the end, and is not satisfactory. It is better, therefore, to turn to the S side after such a change of function, and then finish in the customary manner. The following exercises end in the same key they start. They were not devised for the sake of beauty, but for the practice of modulations of the most varied kind. The author's Revolving Chart of Harmony No. 2, will be found an immense help in the study of modulation.

EXERCISES.

(*Divided figuration in eighth notes. See* § 32.)

(105) $\frac{3}{4}$: T | Sr D^{7} | T = mTr mD | mS^{6} maD | mT = Sr .. | D$^{6}_{4}$ ..^{7} | T Tr = Dr | Sr mS^{6} D T

(106) $\frac{6}{8}$: mS D^{7} mT | mTc = mTr mS .. maD^{7} | mT mTr mS = Sc | S .. D$^{6}_{4}$ ..^{7} | T D Dc = mT | mS mSc mSr D$^{6}_{4}$> .. D ..^{7} | mT

(107) 𝔈: S D^7 T | Tc = Tr S^6 mS D^7 | T Tr D = mDc |

mS D_4^6 | mT mS mSc = T | S Sr mS | D_4^6 .. T

(108) $\frac{3}{4}$: mT | mDr mS^6 | mT = Tr T | S D^7 |

T = mDr mS | D_4^6 | mT mTr = mTc | mS^6 D^7 | mT

(109) $\frac{2}{4}$: T S D^7 | T = mSc .. .. | D_4^6 D^7 .. |

mT mD mS = Sr S^6 | D_4^6 D..^{7} | T S Sr = Tc |

T Tr S mS | T

(110) $\frac{3}{4}$: mT mS^6 maD | mT = Dc D mS | T D_4^6 |

T D = mDr .. | mS .. D | mT mDr = mTc .. | mS D_4^6..^{7} | mT

(111) $\frac{6}{8}$: T D T S | Sr = mT mD mS^6 D^7 | mT .. mTr .. |

mDr = S .. D_4^6 ..^{7} | T D T S | Sr = mT .. D^7 mT .. |

.. = Sc S D_4^6 ..^{7} | T

(112) 𝔈: mT mS mT mD | mDr = T S^6 D..^{7} | T Dr Sc S |

Sr = mD mS^6 D..^{7} | mT mTc mTr .. | mDr = T S^6 D_4^6 |

T = mDc mS D_4^6 ..^{7} | mT

(113) 𝔈: T D T S | Sr = Dc .. D mS | T .. S T |
D = mSc .. $D^{6>}_{4}$ ..^{7} | mT mTc mS .. | mSc = mDr mD^{7}
mS^{6} maD^{7} | mT .. mS^{6} mT | mS = Dc D ..^{7} | T S mS T |
Tc = Sr S D^{6}_{4} ..^{7} | T S Sr D | Dc = Sr S D^{6}_{4} ..^{7} | T .. Tr ..
S = mDr mS .. maD mT .. mTr .. mDr = mSc mS^{6} $D^{6>5}_{4\ 3}$
mT mTc mT .. mTr = mSr mS $D^{6>}_{4}$ ..^{7} | mT mSr $D^{6>5}_{4\ 3}$ |
mT mTc mTr mS | mT = Tc Tr S .. | D^{6}_{4} .. D ..^{7} |
T S mS | T

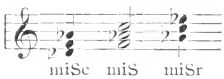
(114) 𝔈: mT mS mT mD | mDr = mSc .. mS maD |
mT .. maD mT | mS = Dc S D^{6}_{4} ..^{7} | T Tc D .. |
Dc — Sr S mS^{6} D^{7} | T .. D^{7} T | D = mSc mS D ..^{7} |
mT mD maD mT | mTc — mDr mS^{6} $D^{6>}_{4}$ ..^{7} | mT mD
mDr mS | mSc — mDr mS $D^{6>5}_{4\ 3}$ | mT .. mTr .. | mD — Sr
D T mS | T .. Tr .. | Sr = Dc Sr D^{6}_{4} ..^{7} | T Tc T .. |
Tr = Dr S D^{6}_{4} ..^{7} | T Sr $D^{6\ 5}_{4\ 3}$ | T Tc Tr D | T = mTc ..
mTr mS^{6} | $D^{6>}_{4}$ .. D ..^{7} | mT mD mS maD^{7} | mT

N. B.

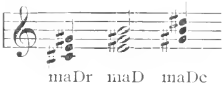
N. B. – Hold out the tone in the bass, even where it does not form part of the chords called for.

B. RELATIVES AND CORRELATIVES OF THE miS AND maD.

§ 48. The letter S indicates the Subdominant chord in a major key, the D indicates the Dominant in a major key. When the major Dominant is used in a minor key, we indicate it by maD; when the minor Subdominant is used in a major key, we indicate it henceforth by miS, because mS should indicate the minor Subdominant in a minor key. The relative and correlative chords of the miS are called minor Subdominant relative and minor Subdominant correlative. In C—major key they are the following chords:



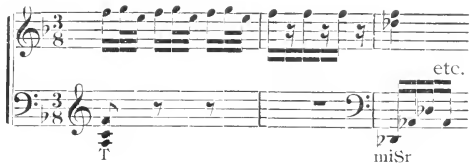
The relative and correlative chords of the maD are called major Dominant relative and major Dominant correlative. In A—minor key they are the following chords:



The miSc occurs frequently, while the maDc is rare and consequently less familiar.

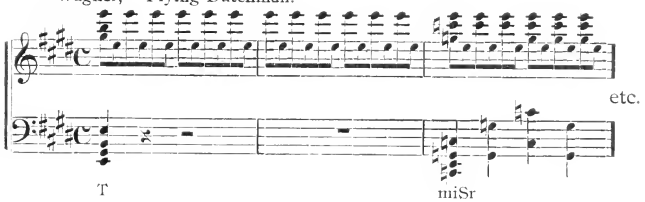
Beethoven. Andante in F.

Ex. 56.



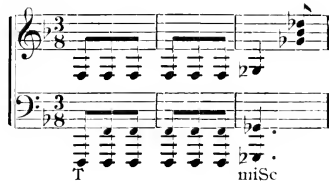
Ex. 57.

Wagner, "Flying Dutchman."



Beethoven. Andante in F.

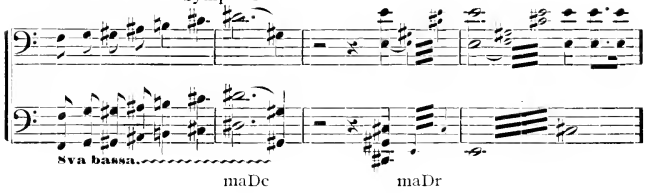
Ex. 58.



etc.

Ex. 59.

Liszt. Dante—Symphonie.



maDc maDr

It would increase this book considerably beyond the size allotted to a text-book, to bring illustrations of all chord connections from the masters; but the assiduous pupil can mark such in his book, as he finds them in his study of Harmonic analysis.

§ 49. CLASSIFICATION OF CHORD CONNECTIONS. (Continued.) The connecting of the relatives and correlatives of the miS, or maD, with the other chords of the key introduces chords of the same mode in succession, the result is a number of new chord connections. The classes that have been met before are:

The Third step. § 41. IN MAJOR, ascending from major to minor chord: miSc—miS. IN MINOR, descending from minor to major chord: maDc—maD.

The Fifth step. § 18. IN MAJOR, from major to major chord: miSc—miSr. IN MINOR, from minor to minor chord: maDc—maDr.

The Minor Third step. § 40. IN MAJOR, descending from major to minor chord: miSr—miS. IN MINOR, ascending from minor to major chord: maDr—maD.

The Tritone step. § 46. IN MAJOR, ascending from major to minor chord: miSr—Sr. IN MINOR, descending from minor to major chord: maDr—mDr.

The Minor Third step. § 45. From major to major chord: S—miSr, mDr—maD. From minor to minor chord: Sr—miS, mD—maDr.

The new chord connections are:

The Chromatic step. § 51. IN MAJOR, ascending from major to minor chord. IN MINOR, descending from minor to major chord.

The Third step. § 52. IN MAJOR, from major to major chord, also from minor to minor chord. IN MINOR, from minor to minor chord, also from major to major chord.

The Diminished Fourth step. § 53. IN MAJOR, descending from major to minor chord. IN MINOR, ascending from minor to major chord.

The Half Tone step. § 54. IN MAJOR, from major to major chord, also from minor to minor chord. IN MINOR, from minor to minor chord, also from major to major chord.

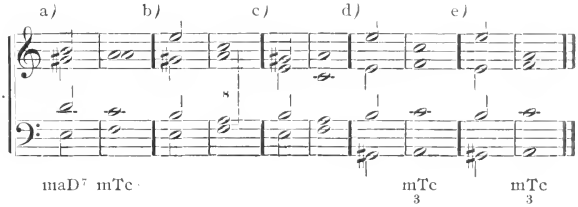
The Augmented Second step. § 55. IN MAJOR, ascending from major to minor chord. IN MINOR, descending from minor to major chord.

The Tritone step. § 56. IN MAJOR, from major to major chord, also from minor to minor chord. IN MINOR, from minor to minor chord, also major to major chord.

The Diminished Third step. § 57. IN MAJOR, descending from major to minor chord. IN MINOR, ascending from minor to major chord.

§ 50. "DECEPTIVE" CLOSE IN THE MINOR KEY. When the mTc takes the place of the mT after a maD (with or without the seventh) at the end of the cadence, we get the most frequent form of "deceptive close" in the minor key.

Ex. 60.

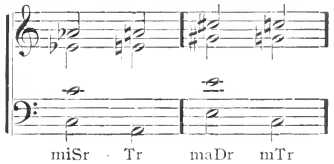


The distance of an octave from alto to tenor may be approved of in all cases where both couples form thirds. a)—c) are the typical forms of the deceptive close in minor. d) and e) are rare and not so good, because the third instead of the prime is in the bass.

§ 51. **CHROMATIC STEP.** IN MAJOR, ascending from major to minor chord: miSc—Sr, miSr—Tr or Sc. IN MINOR, descending from minor to major chord: maDc—mDr, maDr—mTr or mDc.

There is an occasion for a sustained note, and also for two chromatic tone steps, but likewise danger of consecutive fifths and an augmented fourth.

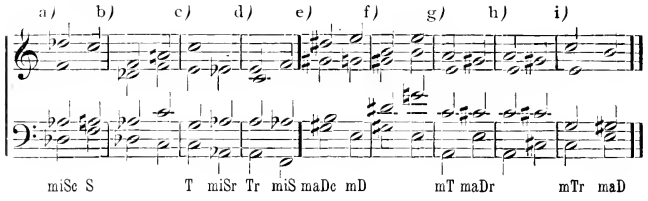
Ex. 61.



§ 52. **THIRD STEP.** IN MAJOR, from major to major chord: miSc—S, T—miSr. Also from minor to minor chord: Tr or Sc—miS. IN MINOR, from minor to minor chord: maDc—mD, mT—maDr. Also from major to major chord: mTr or mDc—maD.

This chord connection meets with no difficulties, but possesses the peculiarity of a chromatic step. A leading of parts as at b) and f) will be employed very rarely, because there are skips in nearly all parts.

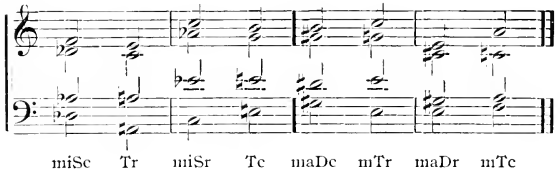
Ex. 62.



§ 53. **DIMINISHED FOURTH STEP.** IN MAJOR, descending from major to minor chord: miSc—Tr or Sc, miSr—Tc or Dr. IN MINOR, ascending from minor to major chord: maDc—mTr or mDc, maDr—mTc or mSr.

Has two leading tone steps and a chromatic step, also possibilities of an undesirable augmented second and an augmented fifth.

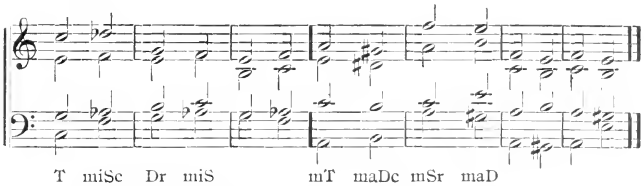
Ex. 63.



§ 54. **HALF-TONE STEP.** IN MAJOR, from major to major chord: T—miSc, D—miSr. Also from minor to minor chord: Tc or Dr—miS. IN MINOR, from minor to minor chord: mT—maDc, mS—maDr. Also from major to major chord: mTc or mSr—maD.

A chord connection which has dangers of consecutive fifths and octaves, because all the notes can form leading tone steps, when the chords are placed side by side. The augmented second is quite an obstacle. The best way to avoid these risks is to double the third of the relative or correlative chord.

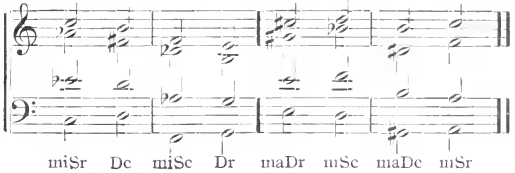
Ex. 64.



§ 55. **AUGMENTED SECOND STEP.** IN MAJOR, ascending from major to minor chord : miSc—Tc or Dr, miSr—Dc. IN MINOR, descending from minor to major chord : maDc—mTc or mSr, maDr—mSc.

Possesses the possibility of two augmented seconds, two augmented fourths, an augmented fifth and an augmented sixth, all of which are permitted only in inversion, when they produce diminished intervals.

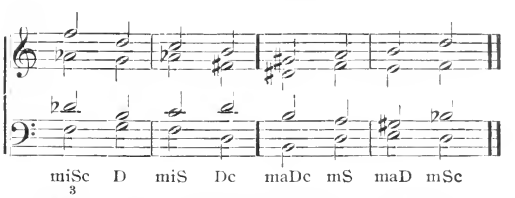
Ex 65.



§ 56. **TRITONE STEP.** IN MAJOR, from major to major chord : miSc—D. Also from minor to minor chord : miS—Dc. IN MINOR, from minor to minor chord : maDc—mS. Also from major to major chord : maD—mSc.

This chord connection has three tritone steps and an augmented sixth, which are to be avoided. When the possible diminished third step is made, the connection becomes simple.

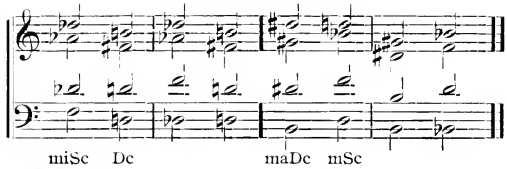
Ex. 66.



§ 57. **DIMINISHED THIRD STEP.** IN MAJOR, descending from major to minor chord : miSc—Dc. IN MINOR, ascending from minor to major chord : maDc—mSc.

Connection of very distantly related chords. An augmented second, an augmented fourth and two augmented sixths are obstacles in the way, but there is the possibility of making two diminished third steps simultaneously.

Ex. 67.



§ 58. **MODULATION.** (Continued.) A great number of modulations are made possible by the use of the miS and its relative and correlative chords, or the maD and its related chords. From a major key fifty-four new modulations can be made into ten major and seven minor keys. From a minor key the same number of modulations can be made into ten minor and seven major keys.

EXERCISE. Study the following tables as advised in § 47.

T = miSr	miS = Tr	Tr = miS
" miSc	" Sr	" maDr
S = miSr	" Dr	" maDc
" miSc	" maDr	Sr = miS
D = miSr	" Tc	" maDr
" miSc	" Sc	" maDc
	" Dc	Dr = miS
	" maDc	" maDr
		" maDc

miSr = T	Tc = miS	miSc = T
" S	" maDr	" S
" D	" maDc	" D
" maD	Sc = miS	" maD
" mTr	" maDr	" mTr
" mDr	" maDc	" mDr
" mSr	Dc = miS	" mSr
" mSc	" maDr	" miSr
" mDc	" maDc	" mSc
" miSc		" mDc
" mTc		" mTc

mT = maDr	maD = mTr	mTr = maD
" maDc	" mSr	" miSr
mD = maDr	" miSr	" miSc
" maDc	" mDr	mDr = maD
mS = maDr	" mTc	" miSr
" maDc	" mSc	" miSc
	" miSc	mSr = maD
	" mDc	" miSr
		" miSc

maDr = mT	mTc = maD	maDc = mT
" mS	" miSr	" mS
" miS	" miSc	" miS
" mD	mDc = maD	" mD
" Tr	" miSr	" Tr
" Dr	" miSc	" Dr
" Sr	mSc = maD	" maDr
" Sc	" miSr	" Sr
" Dc	" miSc	" Sc
" maDc		" Dc
" Tc		" Tc

The object of the following exercises is to crowd therein, in the smallest space possible, some examples of the chord progressions to which the preceding paragraphs are devoted.

In working out, the tonal functions of the chords are to be added by the student.

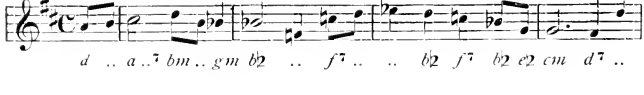
In analysing, adhere to the old key as long as possible, and try to locate the pivoting points of the modulation on the heavy beats of the measure.

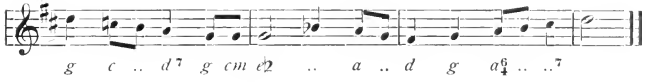
A change of position by way of figuration may occasionally be resorted to, in order to make smoother progressions to the following chord possible, but the given part must never be altered.

A few passing tones are used, find them and mark them p. t.

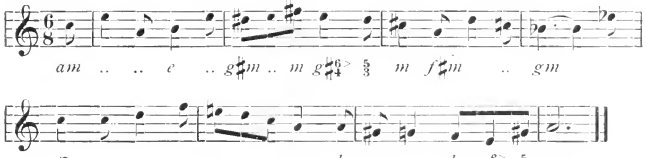
EXERCISES.

(115) Soprano given.

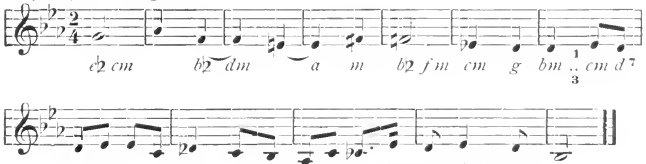




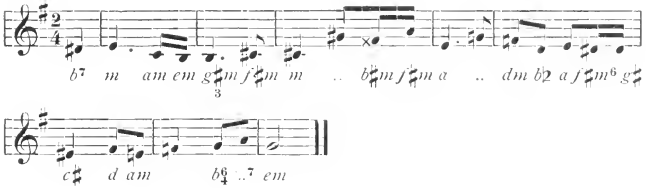
(116)



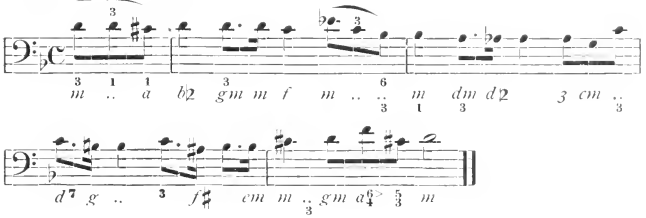
(117) Alto given.



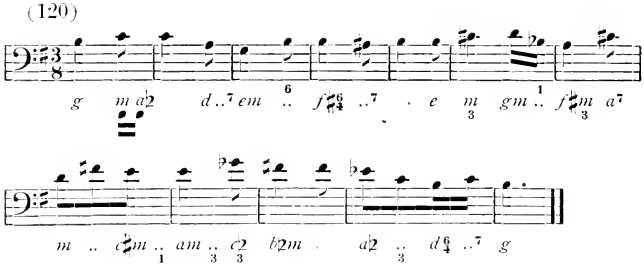
(118)



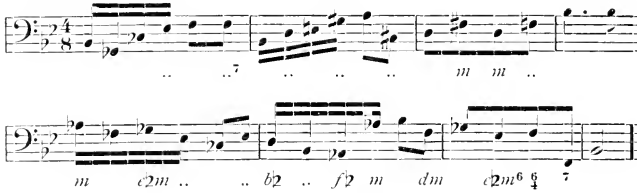
(119) Tenor given.



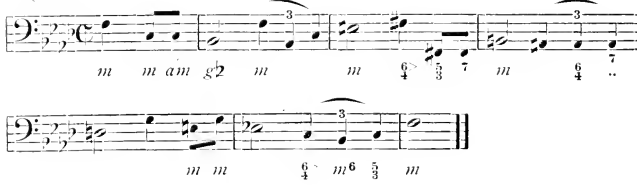
(120)



(121) Bass given.



(122)



KEY TO EXERCISES Nos. 115—122.

(These solutions can be used as new exercises, when worked in different keys.)

(115) C : T (p. t.) | D ..7 Tr .. miS | miSr = T .. D7 (p. t.) |

.. T D7 T S | Sr = miS D7 .. | T S (p. t.) D7 T miS |

miSr = miSc .. D ..7 | T S D6/4 (p. t.) D5/3 | T

(116) $\frac{6}{8}$: mT | .. .. D .. | maDc = mD (p.t.) mS $D_4^{6>\,5/3}$ |

mT mS mSc = maD ..^{7} | mT mTc | mSc = miSr .. D ..^{7} |

T (p. t.) .. Tr = miS D^7 | T miSr = mDc mS $D_4^{6>\,5/3}$ | mT

(117) $\frac{2}{4}$: T Tr | S D | Dc = miS D | T Tr |

miSc = mDr mS | mT maD | maDc = maDr .. mS D^7 |

mT mTc mSc = T .. | miS D_4^6 ..^{7} |

Tr .. miSr = miSc miS^6 | Dr S $D_4^{6\,5/3}$ | T

(118) $\frac{2}{4}$: maD^7 | mT mS mT | maDr = mD mS |

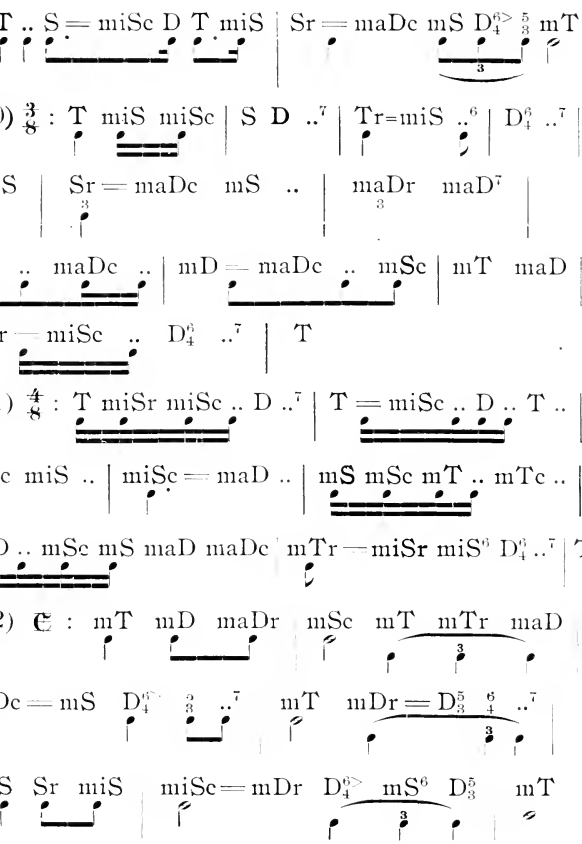
mT .. maDc mS | mSr = maD ..^{7} |

mT mTc maD = miSr miS^6 D | T miSc = mDr mS |

mSc $D_4^{6>}$ ..^{7} | mT

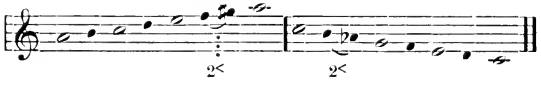
(119) $\mathfrak{C}$: mT .. maD | mTc mS mT mTr = maD mS ..^{6} ..

mT maDr mTr mDr = miSc .. miS ..



C. THE MINOR SUBDOMINANT WITH RAISED THIRD (mS3< AND THE MAJOR DOMINANT WITH LOWERED THIRD (D3>).

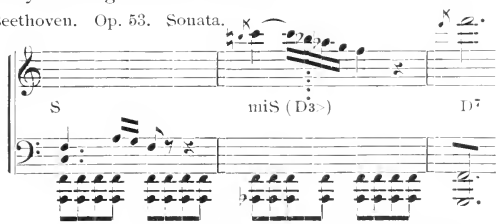
§ 59. The miS in the major key and the maD in the minor key introduce an augmented second into the scale :



Very often, especially in figuration by means of auxiliary or passing tones, this augmented interval is reduced to a whole tone by chromatically altering the 3 of the mS or D.

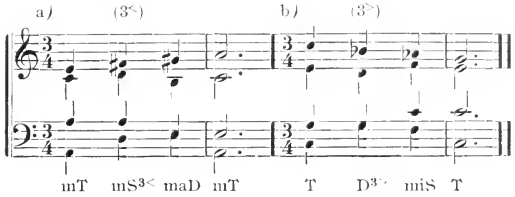
Beethoven. Op. 53. Sonata.

Ex. 68.



But these tones may be harmonized in such a manner that they must be looked upon as chromatically altered thirds of the mS or D.

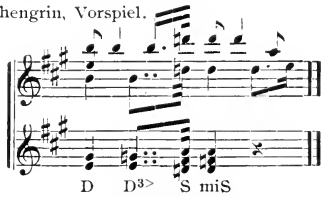
Ex. 69.



Apparently this gives the major key a minor D and the minor key a major S. Nevertheless they must be looked upon merely as licenses, and not as key-making (principal) chords. The artificial notes are supposed to lead to the third of the maD or miS, when they do not do this, then the progressions as musical ellipses require leaps in the conception. The raised third of the mS (mS3<) if used without modulation and without progressing to the 3 of the maD will produce effects peculiar to the "Dorian mode" of the fifteenth to the seventeenth centuries. The lowered third of the D (D3>), if used without modulation and without progressing to the 3 of the miS, will reproduce the characteristics of the "Mixolydian mode." The mS3< illumines the minor key and the D3> clouds the major key, even when the naturally expected chords do not appear.

Wagner. Lohengrin, Vorspiel.

Ex. 70.

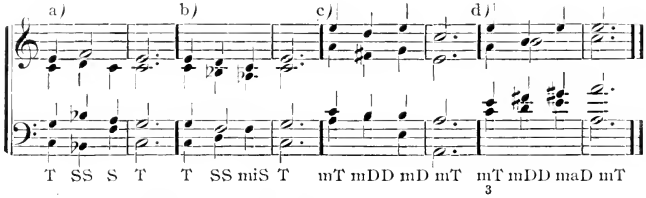


For D3> see also Schubert, Ex. 156, on page 124.

D. THE DOMINANTS OF THE DOMINANT (DD, mDD, maDD) AND THE SUBDOMINANTS OF THE SUBDOMINANT (SS, miSS, mSS).

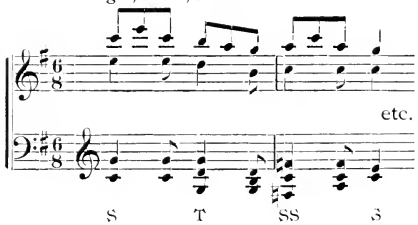
§ 60. A major key can branch (reach) out above the D and below the S and use the chords beyond without inducing a modulation. The use of the DD (Dominant of the Dominant), gives the D side especial stress. The extension of the key to the SS (S of the S) and especially to the miSS (miS of the S) brings darker shades into the key. The same holds good of the mSS. Whereas the mDD and maDD bring brighter shades into the minor key.

Ex. 71.



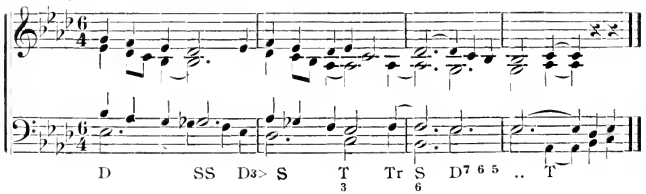
Wagner. Meistersinger, I Act, 2d scene.

Ex. 72.



Ex. 73.

Wagner. Parsifal, I Act, 1st scene.

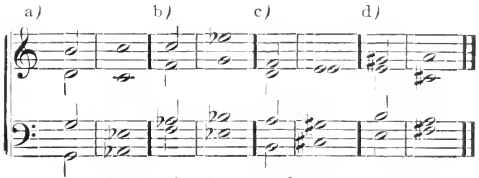


E. THE TONIC VARIANT (Tv, mTv) AND RELATIVES (Tvr, Tvc, mTvr, mTvc.)

§ 61. The chromatic alteration of the third of the T produces a chord of the opposite mode, in C-major key the c-minor chord, in A-minor key the a-major chord. It is indicated by Tv and mTv respectively. Most beautiful effects are obtained by the use of the

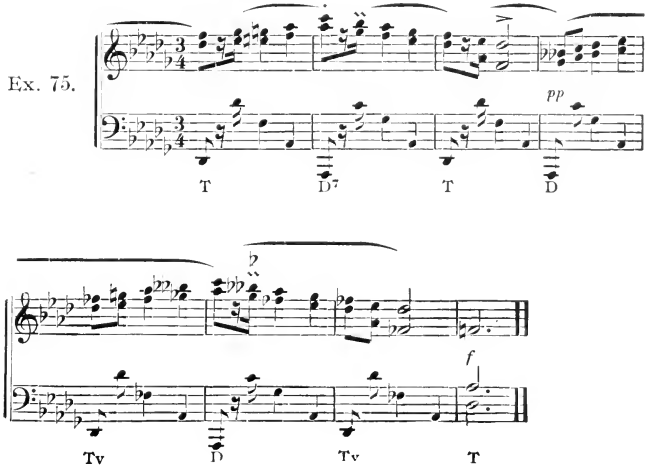
variants of the T. For the major key it is similar, in effect, to a cheerful landscape made dark and gloomy by a passing cloud. In the minor key the effect is the reverse, like a desolate scene made entrancing by sunshine. By using the variant of the tonic, the darkness in major, or brightness in minor, is cast over the entire key, and does not spread only over a part of the key, as with other chords (miS, SS, maD etc). The Tvr (Tonic variant relative) in C major is e♭ major, the Tvc (Tonic variant correlative) is a♭ major chord. The latter is frequently used for deceptive closes. The Tvr can be used for deceptive closes also. The mTvr (minor Tonic variant relative) in A minor is f♯m, the mTvc (minor Tonic variant correlative) is c♯m chord.

Ex. 74.



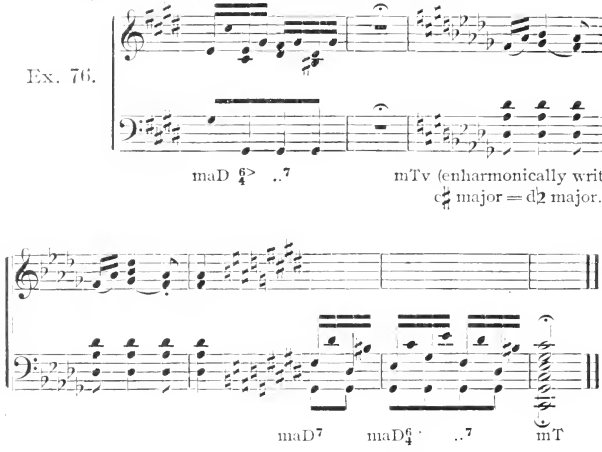
Chopin. Op. 30, No. 3, Mazurka.

Ex. 75.



Schubert. Op. 94, No. 4, Moments musicals.

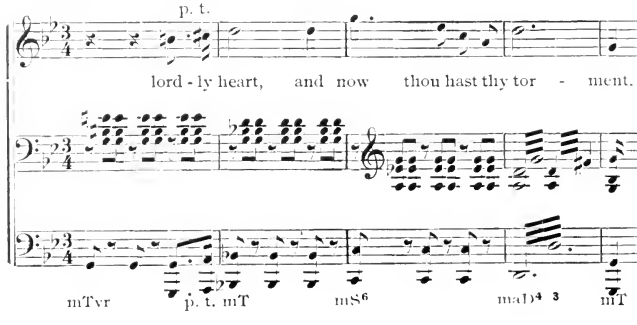
Ex. 76.



Sometimes composers write chords enharmonically changed. It is done to make the reading easier, if it is not done for the sake of modulation. In the last example, which is in C♯-minor, Schubert has a whole (middle) movement in D♭2 major key, instead of C♯ major, and bringing a bit of it at the end of the piece again, he wrote it with the same signature it appeared at first.

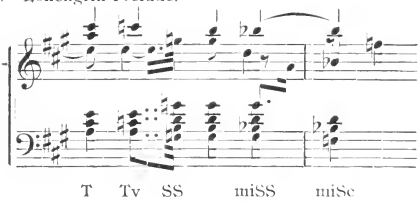
Ex. 77.

Schubert. Dying Strains. No. 8. Atlas.



Wagner. Lohengrin Prelude.

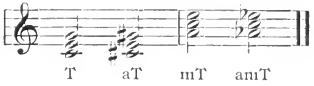
Ex. 78.



See next paragraph for other examples of relatives of the tonic variant.

F. THE aT, aS, aD, amiS, amT, amS, amD AND amaD, THEIR RELATIVES AND CORRELATIVES.

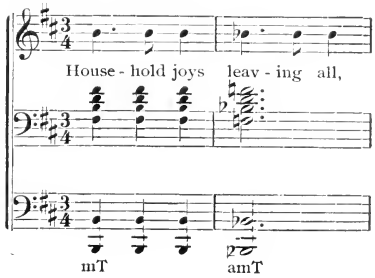
§ 62. A new series of chords can be developed within the key by a certain simultaneous alteration of the notes forming the fifths of the principal chord. For example, a major chord is changed into a minor chord by chromatically raising the notes forming the interval of the fifth (the 1 and 5, the "outer" tones); a minor chord is changed into a major chord by chromatically lowering the notes forming the fifth.



For short, we will call these chords "altered" Tonic and "altered" minor Tonic chords. The tone which is the third of each chord forms the bond (connecting link) of the two chords. These chords are used, as the following illustrations will show.

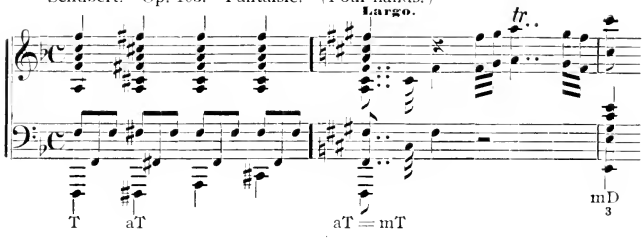
Schubert. Dying Strains. No. 6. Afar.

Ex. 79.



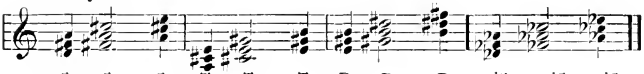
Ex. 80.

Schubert. Op. 103. Fantaisie. (Four hands.)

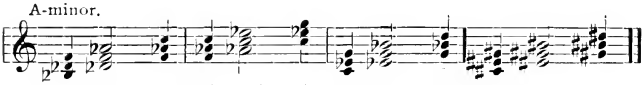


These chords have their relatives too, and appear more frequently than some would suppose.

C-major.



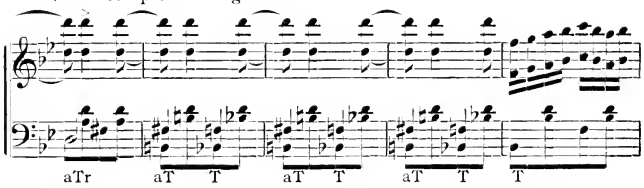
A-minor.



This series of chords gives most exquisite tints to tonal harmony.

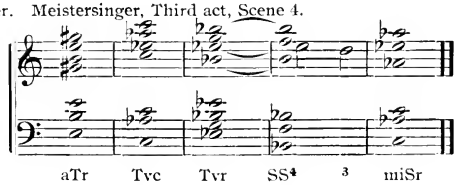
Ex. 81.

Liszt. Rhapsodie Hongroise VI.



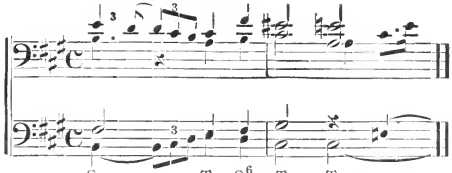
Wagner. Meistersinger, Third act, Scene 4.

Ex 82.



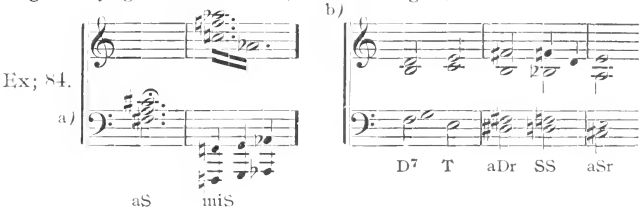
Wagner. Lohengrin, Act I, Scene 3.

Ex. 83.



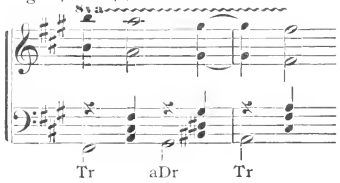
Wagner. Flying Dutchman, Act III, No. 13. Rheingold, Fourth Scene.

Ex; 84.

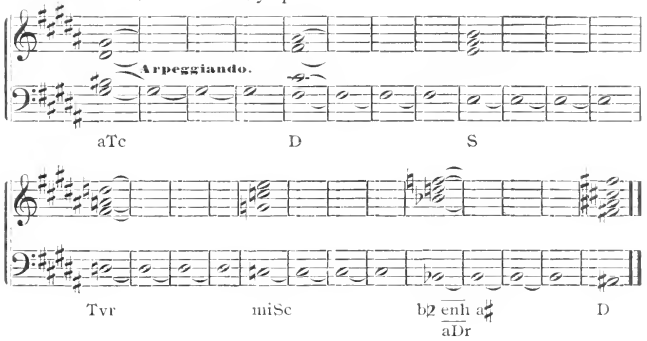


Wagner. Lohengrin, Act I, Scene 3.

Ex. 85.

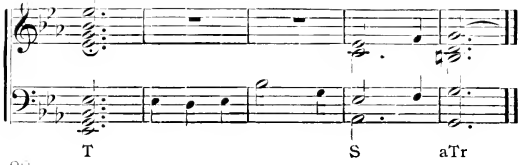


Ex. 86. Liszt. Dante-Symphonie.



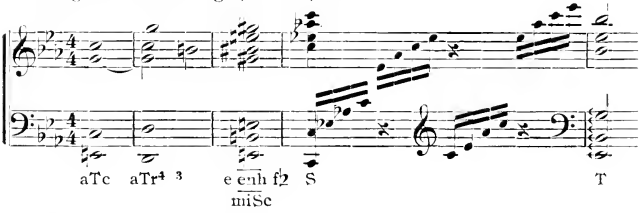
Wagner. Lohengrin, Act I, Scene 3.

Ex. 87.



Ex. 88.

Wagner. Meistersinger, Act III, Second scene.



§ 63. **CLOSES OR CADENCES,** are successions of chords leading to a momentary or complete end of a phrase, section or movement.

A COMPLETE CLOSE is a close on the Tonic at the end of a period or section.

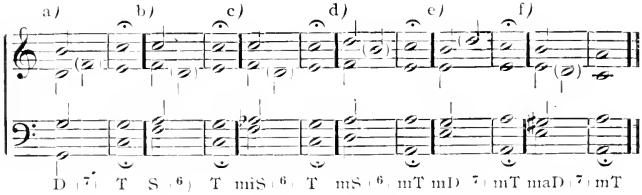
A HALF CLOSE is a close on the Dominant. In a wider sense also on the Subdominant, and all chords derived from either Dominant.

A DECEPTIVE CLOSE is a temporary close on a relative or correlative chord of the Tonic, and leads to a new cadence. This classification conforms in the main to the terminology generally accepted, but it is far more comprehensive.

COMPLETE CLOSES

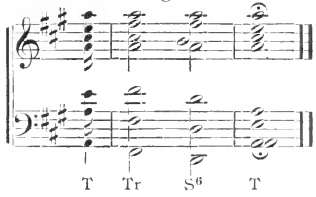
from the Dominant with or without the seventh, and from the Subdominant with or without the sixth.

Ex. 89.



Th. Dubois. Postlude in A for Organ.

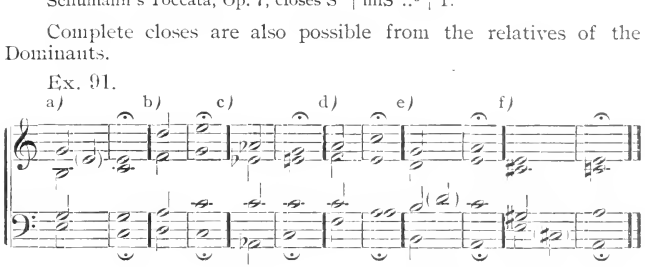
Ex. 90.



Schumann's Toccata, Op. 7, closes S | miS ..$^{6}_{4}$ ^{3}T.

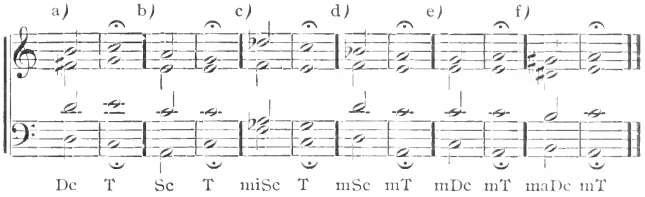
Complete closes are also possible from the relatives of the Dominants.

Ex. 91.



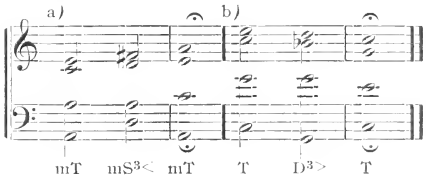
Complete closes are possible from the correlatives of the Dominants.

Ex. 92.



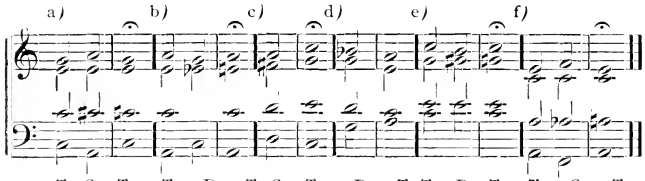
It is also possible to close elliptically from the mS$^{3}<$ or D$^{3}>$ (skipping over the expected maD or miS) to the Tonic.

Ex. 93.



Other closes would be from the aD, aS, amiS, amS, amD, amaD and their relatives to the T. A few are given below, the student can work out the remaining ones.

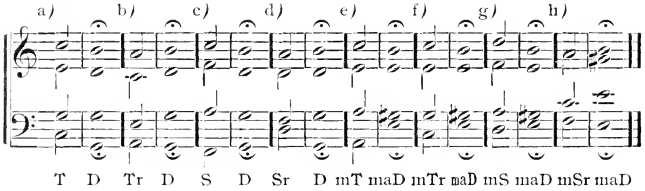
Ex. 94.



HALF CLOSES.

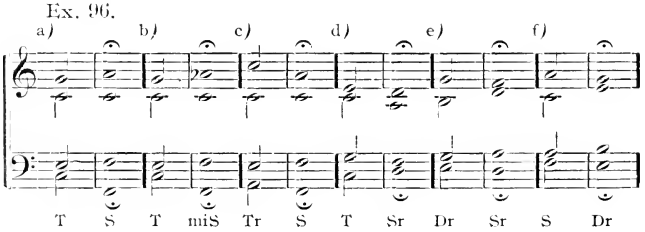
The term half close has usually been restricted to endings on the major Dominant, but there is really no binding reason for this.

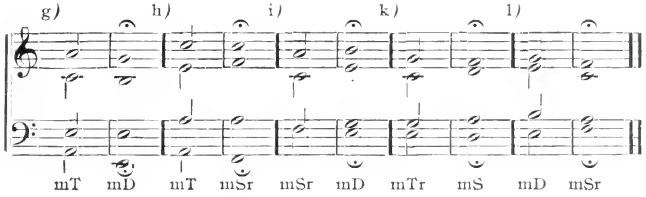
Ex. 95.



This selection shows what is generally meant by a half close. It is certain that any dominant or any relative or correlative chord of either dominant may become the bearer of a half close (principal subdivision, close of a part). The following small selection will show a further number of good effects.

Ex. 96.

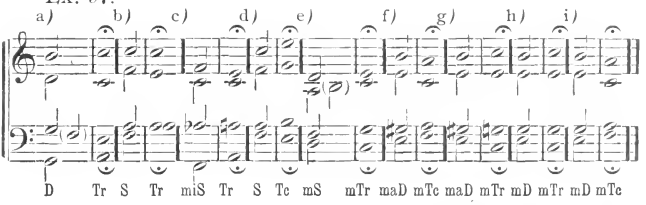




DECEPTIVE CLOSES.

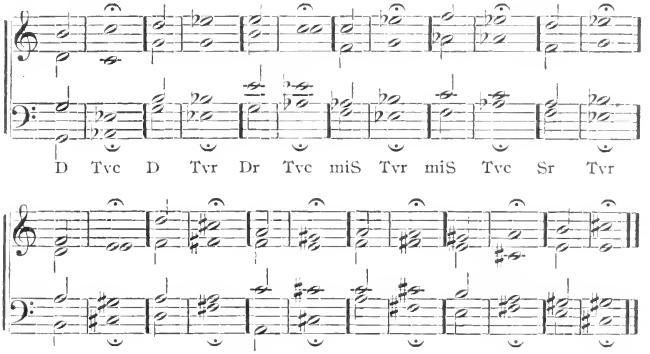
We have already explained some deceptive closes in § 39 and §50. They are endings in which a Tonic relative or correlative takes the place of the expected Tonic.

Ex. 97.



A series of new possible forms of deceptive closes is gained by the use of the relative and correlative chords of the tonic variant.

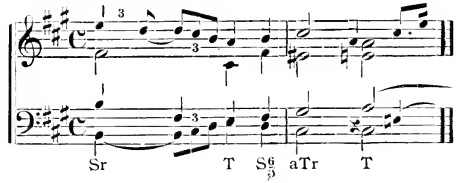
Ex. 98.



The last deceptive closes give rise to difficulties in retaining the key and come near being modulations. In order to counteract this impression, they necessitate the use of chords of the $mS^{3<}$ or $D^{3>}$ for the return over the maD or miS and the earliest possible regaining of the mD or S or their relative chords. Numerous closes possible from, and to, the aS, amiS, aD, aT, amS, amD, amaD and amT, the student will know how to work out and analyse according to the above comprehensive classification.

Wagner. Lohengrin, Act 1, scene 3.

Ex. 99.

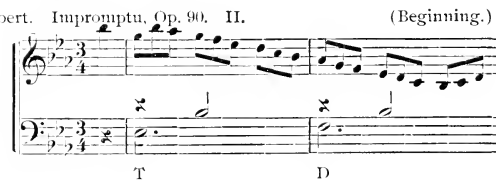


deceptive close.

In old polyphonic music it was essential that every composition should end with a major chord, even though the key in which it was written was minor. The third thus made major by an accidental sharp or natural was called the "Tierce de Picardie." Even Bach conscientiously observed the custom. It is still a favorite practice to close a minor piece with the mTv. Schubert, who was a great innovator in Harmony, attempted the opposite. His Impromptu, Op. 90, No. 2, begins in E♭ major, thus:

Schubert. Impromptu, Op. 90. II. (Beginning.)

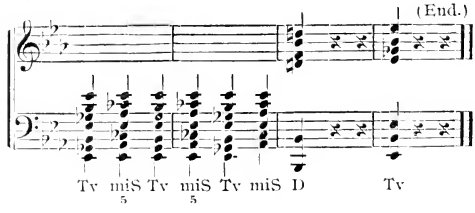
Ex. 100.



and ends in E♭ minor thus:

(End.)

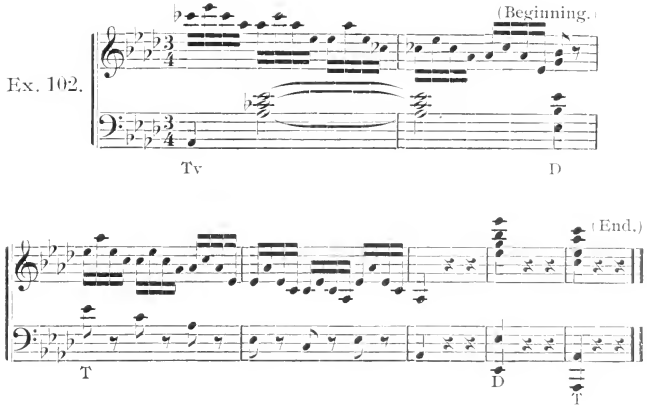
Ex. 101.



Schubert's A♭ major Impromptu Op. 90, No. 4, ends in A♭ major but begins with the Tv, A♭ minor.

Ex. 102.

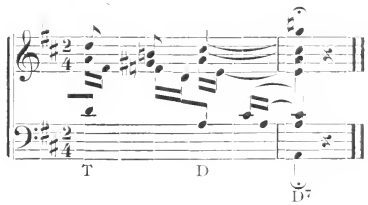
Schubert. Impromptu, Op. 90, IV.



Sometimes composers see fit to end a piece on a Half close, desiring to leave that impression of unfinishedness upon the hearer. They even end with a discord (D^7), as Schumann has done:

Ex. 103.

Schumann. Op. 15, Kinderscenen. No. 4, Entreating child.

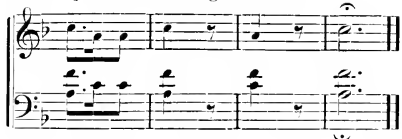


Chopin's Mazurka Op. 30, No. 2, is written with B minor key signature and ends on F♯ minor chord, the mD. It would be best to consider this piece as being in the key of F♯ minor, and one in which special stress has been laid upon the Subdominant side of the key. That this can be done the paragraph on "Intermediate Cadences" will make clear.

A piece can also close with the 3 in the bass:

Th. Kullak. Op. 62, No. 5, Wiegenliedchen.

Ex. 104.

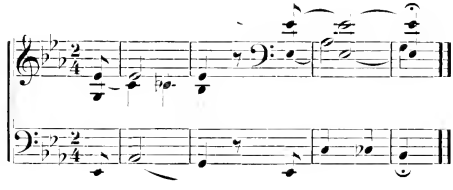


Liszt ends his "Traurige Mönch" with the 3 of the C-minor chord in the bass.

Even the close with the 5 in the bass has been ventured.

Schumann. Op. 7, Kreisleriana.

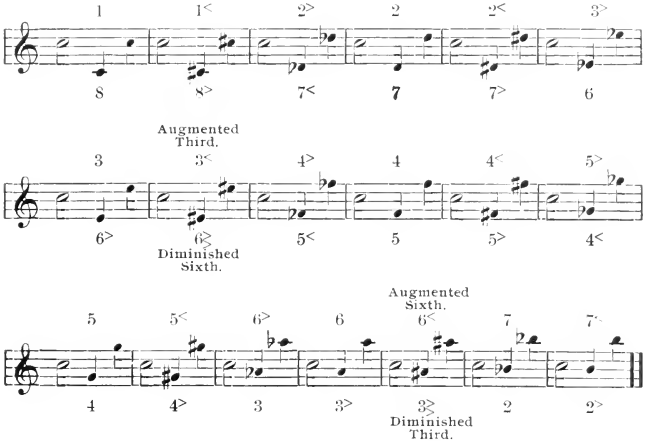
Ex. 105.



A composer can begin and end with any chord he chooses. When a piece closes with the T, it naturally conforms to the proverb "all's well that ends well." Where a composer merely "quits," there the listener has to find the close for himself.

§ 64. CLASSIFICATION OF CHORD CONNECTIONS (Concluded). The object of arranging chord successions into classes is to point out the inherent and latent force contained in them, and their various technical difficulties, to the student. The guiding points for all chord connections are: the avoidance of doubling the thirds of the principal chords in parallel motion; the avoidance of all augmented intervals; the possibility of doubling the thirds of all relative and correlative chords; the use of sustained tones, half steps and chromatic steps where feasible. The following review contains nearly all chord connections possible, especially if we abstain from connecting extremely distantly related chords, and do not consider their connection with the intermediate cadences (see § 74). It is surprising to see how many chords can be conceived as belonging to the key and can be used without inducing a modulation. In this labyrinth of chord successions the tonal functions tell what office and importance the chords have in the key. The entire number of chords is really to be reduced to only three groups. They are either Tonic, Dominant or Subdominant harmonies, as the letters of the tonal functions indicate. We name the chord connections according to the intervals the fundamental notes produce, and mark the mode of the chords. By inverting the intervals all chord connections

can be included within the interval of a tritone (augmented fourth). A fifth is but a fourth, when inverted. The following table will explain this. The inversion of an interval is the placing of the lower tone an octave above the original upper tone, or vice versa. (See also § 4.)



To illustrate the plan of classification again, we will take c and d, major or minor chords, for example. Their fundamental tones form a Whole tone step; but there are different kinds of Whole tone steps in chord connections, because the major or minor chords can succeed each other, thus:

a) major to major chord, c—d.
b) major to minor chord, c—dm.
c) minor to minor chord, cm—dm.
d) minor to major chord, cm—d.

Every succession has its peculiarities, inherent force and meaning. The succession c minor to b♭ major for example, is not classed as a seventh step, because its explanation will be found in its inversion, the Whole tone step, major to minor chord, and thus in all similar cases. Now follows the list of chord connections with various remarks.

1. *Change of Mode* (*of Chords*). Major to minor chord, or vice versa. (§ 25.) Easily understood. Occurs in the major key between S—miS, also **Sr**—DD, D—D$^{3>}$, T—Tv, etc. Occurs in the minor key between mD—maD, mDr—mSS, mS—mS$^{3<}$, mT—mTv, etc.

2. *Chromatic step.* (Enharmonic with Half tone step.) *a*) Major to major chord. miSc—DD, mSc—maDD, etc. Ascending these successions produce beautiful effects of sudden brightness, descending of sudden darkness.
b) Major to minor chord. See § 51, further possibilities are SS—Dc, T—aT, mSc—mDD, amT—mT, etc.
c) Minor to minor. Compare 2 a) above. miSS—Dc, miS—aS, mSS—maDc, etc.
d) Minor to major chord. amiSr—aSc or DD, miSS—aDr, amDc or mSS—amaDr, amSr—maDD, etc.

3. *Half Tone step.* (Enharmonic with Chromatic step.) *a*) Major to major chord. (§ 54 and 50.) D—Tvc, maDD—mDc or mTr, mDr—amT, etc.
b) Major to minor chord. A very difficult step in tonal harmony. T—amiSr, D—amiSc, amaDr—mT, amaDc—mS, etc.
c) Minor to minor chord. (§ 54.) mTvc—mS, Sc or Tr—miSS, Dc—Tv, aT—Sr, etc.
d) Minor to major chord. (§ 43.) $D^{3>}$—miSr, Tr—SS, Tv—miSc, Sr—Tvr, maDr—$mS^{3<}$, mDD—mTr, maDc—mTv, mTvr—mDr, etc.

4. *Whole Tone step.* (Enharmonic with Diminished Third step. *a*) Major to major chord. (§ 22,). This chord succession makes the impression of a S and D following each other, and creates the desire of having the Tonic appear. The whole tone step is really a double fifth step, c—(g)—d. Usually a chord follows which is related to one of the two chords. But chords can also be brought in a series of whole tone progressions and produce beautiful effects as the the excerpt of Liszt's Dante Symphony in § 62 shows. miSr—SS, SS—T, T—DD, Tvc—SS, miSc—Tvr, Tvr—S, T—aSc, $mS^{3<}$—maD, mTr—$mS^{3<}$, amT—mSc, etc.
b) Major to minor chord. (§ 42.) S—$D^{3>}$, DD—Tc or Dr, Tvr—miS, $mS^{3<}$—mD, mTc or mSr—mSS, maD—mTvr, etc.
c) Minor to minor chord. (§ 22.) Compare 4 a). miS—$D^{3>}$, $D^{3>}$—Tr, Tv—Sr, mT—mDD, mSS—mT, mD—mTvr, amDc—mT, etc.
d) Minor to major chord. (§ 24.) Makes the impression of a minor S followed by a major D, and naturally creates the desire of having the skipped chord (the T of both chords) follow. miSS—T, Tv—DD, mT—maDD, mSS—mTv, etc.

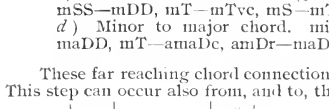
5. *Augmented Second step.* (Enharmonic with Minor Third step.) *a*) Major to major chord. amiS—D, amT—maDD, etc.
b) Major to minor chord. (§ 55.) S—aD, mSc—mTvc, amT—mDD, etc.
c) Minor to minor chord. amiSr—Tc or Dr, miSS—aT, mS—amaD, etc.
d) Minor to major chord. Certainly rare. amiSc—aDr, amTr—amaDr, etc.

6. *Diminished Third step.* (Enharmonic with Whole tone step.) *a*) Major to major chord. DD—amiS, amaDr—mSc, maDD—amS, etc.
b) Major to minor chord. aDr—amiSr, amaDr—amSr.
c) Minor to minor chord. aD—miSS, amaD—mSS, etc.
d) Minor to major chord. (§ 57.) aD—SS, mTvr—amT, etc.

7. *Minor Third step.* (Enharmonic with Augmented Second step.) *a*) Major to major chord. (§ 45.) DD—S, T—Tvr, aTc or aSr—T, aTr—D, SS—miSc, mSc,—amS, etc.
b) Major to minor chord. Of good effect, leads like the Whole tone step back to the intermediate chord that was skipped. D—miSS, DD—miS, maDD—mS, maD—mSS, SS—miSc, maDc—mDD, etc.
c) Minor to minor chord. (§ 45.) mD—miSS, aT—Tc or Dr, Tc or Dr —$D^{3>}$, Sc or Tr—Tv, maDc—mDD, etc.
d) Minor to major chord. (§ 40.) miSS—miSc, Dc—DD, maDc—maDD, mSS—mSc, etc.

8. *Third step.* (Enharmonic with Diminished Fourth step.) *a*) Major to major chord. (§ 52.) SS—DD, Tvc—T, Tvr—D, T—aTr or aDc, mDr—maDD, mTc or mSr—mTv, mSc—mS$^{3<}$, etc.
b) Major to minor chord. (§ 41.) SS—Sr, mDr—mDD, etc.
c) Minor to minor chord. (§ 52.) miSS—Sr, Tv—Tc or Dr, D$^{3>}$—Dc, mSS—mDD, mT—mTvc, mS—mTvr, amTr or amSc—mT, etc.
d) Minor to major chord. miSS—DD, amiSc—T, miS—aSr, mSS—maDD, mT—amaDc, amDr—maD, etc.

These far reaching chord connections are usually employed for modulations. This step can occur also from, and to, the tonic as a close.



But generally the relative of the tonic follows here.

T amiSc T mT amaDc mT

9. *Augmented Third step.* (Enharmonic with Fourth step.) *a*) Major to major chord. amiS—aSr, amT—amaDc, etc.
b) Major to minor chord. amiS—Sc or Tr, miSc—aS, mDc or mTr—amaD, amD—maDc, etc.
c) Minor to minor chord. amiSc—aT, etc.
d) Minor to major chord. Possible with intermediate cadences only.
10. *Diminished Fourth step.* (Enharmonic with Third step.) *a*) Major to major chord. T—amiS, aTr or aDc—Tvc, maD—amT, etc.
b) Major to minor chord. Undoubtedly rare. aTc—amiSr, etc.
c) Minor to minor chord. aT—miS, amaD—mT, maDr—amTr or amSc, etc.
d) Minor to major chord. (§ 53.) Tc or Dr—Tvc, Tv—amiS, aT—S, mTvc—mTc or mSr, amaD—mTv, mD—amT, etc.
11. *Fourth step.* (Enharmonic with Augmented Third step.) *a*) Major to major chord. (§ 21.) S—SS, S$^{3<}$—mDr, maDD—maD, maD—mTv, etc.
b) Major to minor chord. (§ 23.) S—miSS, D—Tv, maDD—mD, mTv—mS, etc.
c) Minor to minor chord. (§ 21.) Sr—D$^{3>}$, miS—miSS, Tv—miS, mDD—mD, etc.
d) Minor to major chord. (§ 44.) This chord connection is usually understood as having the relationship of Sr—D (mDr—mS), and circumscribing the tonic thus, it is an important means of modulation. The step occurs also as: D$^{3>}$—T, miS—SS, Sc or Tr—DD, miSS—Tvr, mT—mS$^{3<}$, mDD—maD, mSS—mDc or mTr, mTvr—maDD, etc.
12. *Tritone step.* *a*) Major to major chord. (§ 56.) This chord connection stands in the relationship of a minor S and major D (major or minor key), consequently makes a big sweep, and will lead back to an intermediate chord. Like all far reaching steps it is frequently employed in modulations. miSr—DD, Tvc—DD, SS—aTr or aDc, mTc or mSr—maDD, etc.
b) Major to minor chord. (§ 46.) miSc—D$^{3>}$, SS—Tc or Dr, Tvc—Sr. Tvr—Tr or Sc, T—aS, mS$^{3<}$—maDc, mTc or mSr—mDD, mDr—mTvc, mTr or mDc—mTvr, amD—mT, etc.
c) Minor to minor chord. (§ 56.) miSS—Tc or Dr, mSS—maDr, mSS—mTvc, amTr or amSc—mDD, etc.
d) Minor to major chord. amiSr—D, miSS—aTr or aDc, mS—amaDr, amSr—maD, etc. Very distantly related chords. The excursion from the relatives of the tonic ought not be without an object. These chord successions are used more as a means of modulation than as movements within tonal harmony.
13. *Fifth step.* (§ 18.) The most readily understood step of all. Compare also with Fourth step § 21. As can be seen from the foregoing list, a

great number of chords foreign to the scale may be introduced into the key, without changing it. Chords closely related can be readily exchanged and follow one another, but when chords distantly related are brought after each other, then they are usually succeeded by an intermediate chord, one that is related to both.

EXERCISES.

The following exercises are not for figuration, but a change of position may occasionally be employed for the sake of gaining a smoother progression to the next chord. Modulations have been avoided in order to be better able to survey the extensive relationship of chords.

(123) $\mathfrak{C}$: T $D^{3>}$ | miS $..^{6}$ | T amiSc | T $\underset{3}{..}$ |

S Sr | miS .. | D^{6}_{4} $\frac{5}{3}$ | T

(124) $\frac{4}{4}$: mT mTr mSr mT | mS $mS^{3<}$ mDD maDD |

mD mDr mDc mSS | mS .. mDr amDc |

mT mTvc maD maDr | mSS mSc mS $\overset{3}{mT}$ |

maDc mS $maD^{6>}_{4}$ $..^{7}$ | mT

(125) $\frac{6}{8}$: T | D Tr Sr DD | D $..^{7}$ Tvc miS |

etc.

D^{6}_{4} .. D^{5}_{3} $..^{7}$ | T Tvr T

(126) $\mathfrak{C}$: mT mTv mSr | mSc .. mDD | maDD maD $..^{7}$ |

etc.

mT amDr .. | mT mTv maD | mTvr maDD .. |

maD mS^{6} maD^{7} | mT

(127) $\frac{3}{2}$: miS Dr Tr | miSc miS .. | DD D^{6}_{4} $\frac{5}{3}$ |

T aDc | T Tc T | D $D^{3>}$ miSr | miS^{6} D^{6}_{4} $..^{7}$ | T

(128) $\frac{3}{4}$: mT mS$^{3<}$ mDD maDc | maD mSc mS$^{3<}$ maDr |

mT maDD mD maD^{7} | mT

(129) $\mathfrak{C}$: T Tr Sr DD | D Dc D$^{3>}$ miSr |

T miSS S miS^{6} | $^{3}_{}$T D $^{1}_{}$T

(130) $\frac{3}{4}$: mT mTc mS amSr | maDD maD mT mSc mSS |

mS ..^{6} mTvc maD | mT mTvr mT

(131) $\frac{3}{4}$: T Tv Dr | D Dc SS | miSS miS ..^{6} | T aSr |

T Tv miSc | Tvc Tvr miSc | miSr miS D^{7} | T

(132) $\frac{6}{8}$: maD | mT maD^{7} mSr mT | mTr maD maDc .. |

mSS mS D ..^{7} | mT .. maD mDD | maD .. mT mTr |

mT .. amSc .. | mT mS^{6} D$^{6>}_{4}$ ^{7} | mT

(133) $\frac{4}{4}$: T D^{7} Tr T | D D$^{3>}$ SS miSS | S Sr Sc DD |

D Sr aSc | T Tvc miS miSr | DD Dc D T |

miSc Dc D miS | T

(134) $\frac{2}{4}$: mT mS$^{3<}$ | maD ..^{7} | mT amaDc | mT .. |

maD maDD | mSc mS^{6} | maD$^{6>}_{4}$ $^{5}_{3}$ | mT

In the preceding paragraphs the most daring chord connections were explained. We went as far as it is at all possible in the connection of chords related to one and the same tonic. A great many of the chord successions considered in these paragraphs usually induce modulation. The greatest power of expression in harmony does not consist in the frequent change of key, but rather in extending the boundaries of the key as modern composers have done. Our view of tonal harmony has now become extensive, and the following chapters lead to more common chord formations and will bring easier work.

CHAPTER V.

DISCORDS. Concluded.

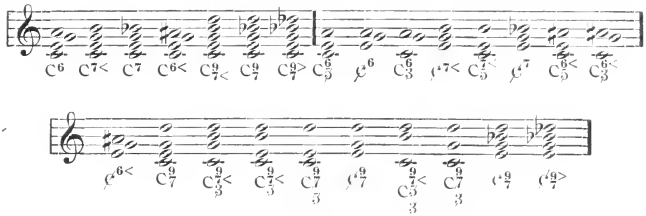
§ 65. THE THEORY OF DISCORDS. We have already become acquainted with some dissonant chords. We will now arrange them into groups, according to certain principles, because then other similar formations will be understood immediately. The principal and characteristic discords (the Dominants with their sevenths and the Subdominants with their sixths) have been explained in § 28—30. Dissonance is the interference with the consonance of a major or minor chord, and the result a striving to regain that purity again. Discords are full of impulse and spirit, and produce a restless craving in the mind. The consonance of a major or minor chord is disturbed:

a) by the *addition* of tones foreign to the complete chord.
b) by the *delaying* of chord tones by means of neighbor tones foreign to the chord (Suspensions.) The foreign tones enter on the accented beat.
c) by *moving* a step of a second (half or whole tone step) *from* a chord tone (passing tones and changing or auxiliary tones.) The foreign tone enters on the unaccented beat or part of a beat, and is merely an insertion between two chord tones. These are the most easily intelligible but weakest kind of discords, so-called "passing dissonances," "passing discords" or "passing harmonies." We have used them extensively in figuration exercises.
d) by *chromatic alteration* of chord tones (Altered chords.)

These four kinds of dissonant formations can be united in various ways in every major or minor chord, no matter what its function is in the key, whether T, D or S, or one of the relatives or correlatives of these.

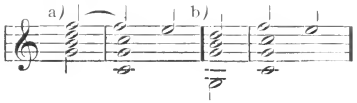
A. **ADDED TONES.** Added tones to a major chord. The same formations are possible with the minor chord.

(With some tones of the chord omitted.)

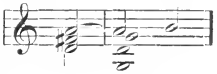


The tonic chord has no characteristic additional tone, like the D or S; it is the only one chord in the key that always remains pure. Discords produced by adding tones to the tonic must be looked upon as accidental formations; the added tone may be taken (anticipated) from the succeeding harmony or lead degree-wise to tones of the following chord.

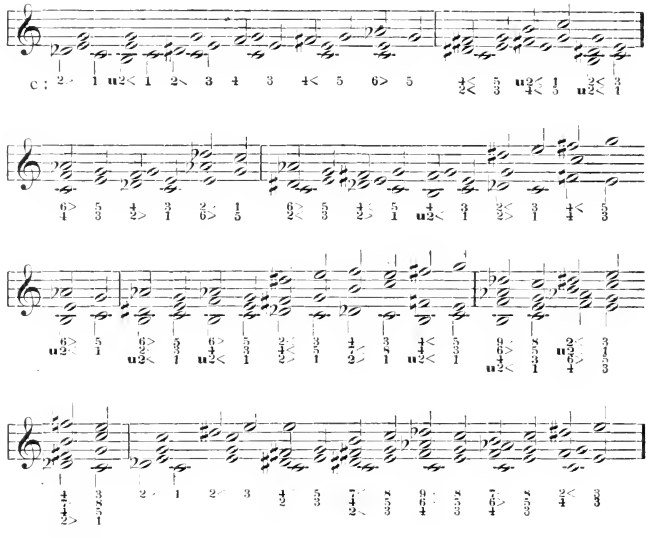
B. **SUSPENSIONS.** Suspension is the substitution of a neighbor tone (a whole or half step) above or below in place of a tone belonging to a consonant chord, to which the suspended tone afterward proceeds. Suspension chords are therefore always thought of in connection with what follows. The suspension is either prepared (when the dissonant tone is tied a) from the preceding chord) or it appears free b).



In the prepared suspension the first occurrence of the tied note is called the "Preparation," the point of dissonance resulting from the motion of the other parts is called the "Percussion" of the discord, and the release of the dissonance, when the dissonant tone proceeds to its natural place in the new chord is called the "Resolution." Some theorists call prepared suspensions resolving upward "Retardations." Good effect, as regards the sound of prepared suspensions is certain so long as we avoid writing the sustained note simultaneously in the same octave-position as the chord tone which it retards. Being of a melodic nature, unprepared whole tone or half tone suspensions from above or below are possible before any chord tone, but they are not of equal value. Half tone suspensions from below are always easily understood, those from above only when they use notes proper to the scale, or of nearly related chords. The student is warned against the misuse of suspensions foreign to the scale. Too much seasoning is apt to spoil the dish.

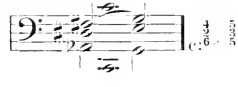


SUSPENSIONS in a major chord, can be used also without sharps and flats.

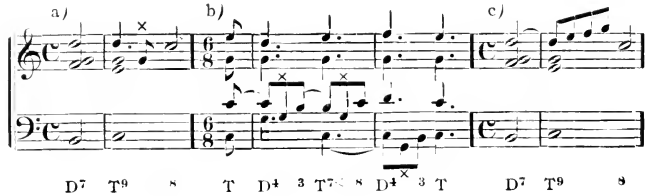


Schubert. Am Meere.

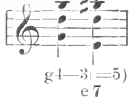
Ex. 106.



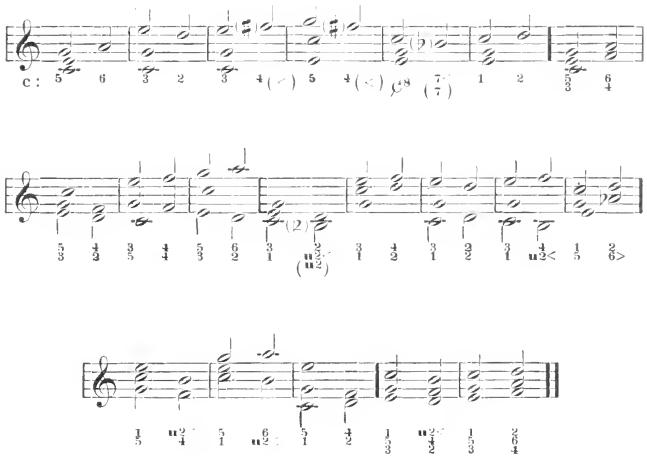
The resolution of a suspension may be deferred (disguised) by interpolating tones of the resolving chord between the suspension and its resolution a) and b). This is an ornamentation of the dissonance. The ornamentation may be varied in many ways c).



A *resolution by progression* occurs in the case of a suspension dissonance, when the progression of the part takes place which, had the chord remained, would have removed the dissonance, but at the same time several parts move, so that a new chord is produced. The suspension (fourth) c certainly goes to the third b, but the other parts move at the same time to the chord of the seventh on e.

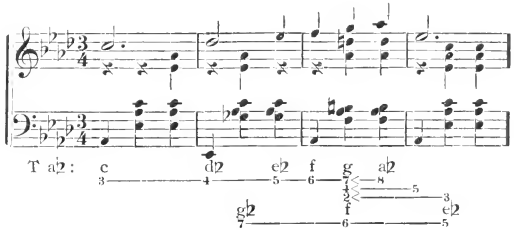


C. **PASSING TONES.** (Passing harmonies derived from a concord.)

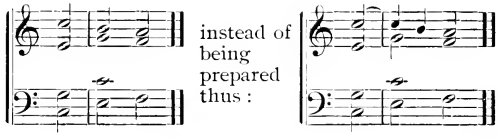


Tschaikowsky. Op. 37, No. 12. Christmas.

Ex. 107.



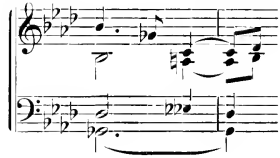
A passing tone may enter freely on a heavy beat with more or less good effect, for example:



Leading tones (that is, tones a half step above or below any tone of a chord) can be used, irrespective of what precedes, and at any position relative to the rhythmic division of the music. In the following example a leading tone (c) is sustained as a suspension tone into the next chord. The auxiliary tone a♯ is sustained as a suspension, while e♭2 acts as mere auxiliary tone between the two d♭2's.

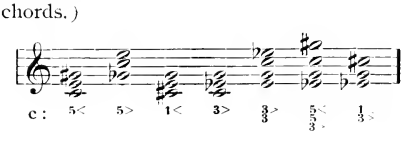
Wagner. Tristan and Isolde. Act II, scene 2.

Ex. 108.



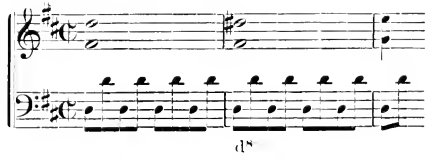
D. CHROMATIC ALTERATION OF CHORD TONES.

("Altered" chords; also in four parts with the unchanged form of the altered chords.)

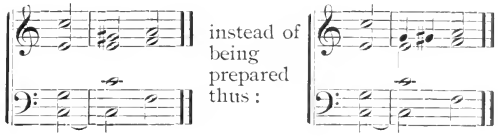


Mozart. Don Juan Overture.

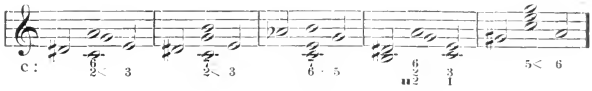
Ex. 109.



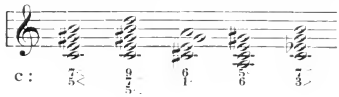
An altered tone may enter freely on a heavy beat with more or less good effect, for example :



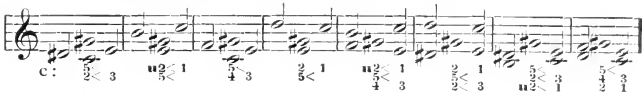
Combination of Added and Suspension Tones.



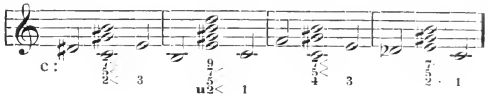
Combination of Added and Altered Tones.



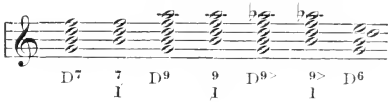
Combination of Suspension and Altered Tones.



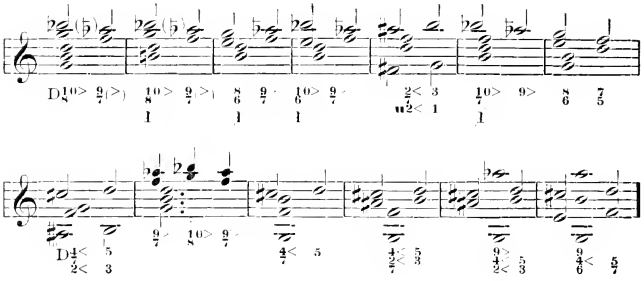
Combination of Added, Suspension and Altered Tones.



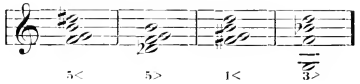
Additions to the D. (See § 66.)



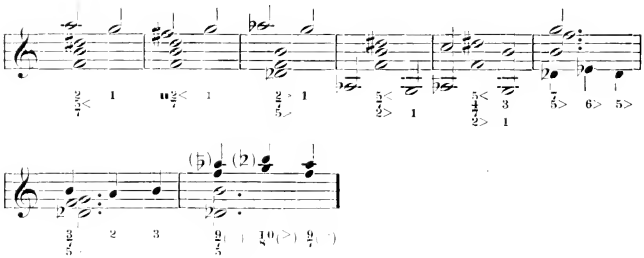
Suspensions in the D^7, D^9 and $D^{9>}$ (see § 66).



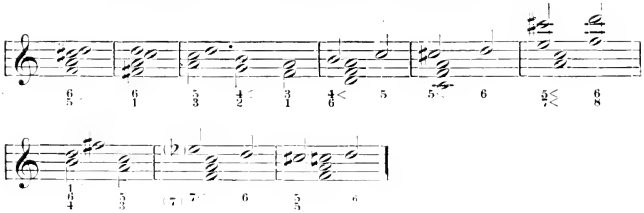
Altered Tones in the D^7.



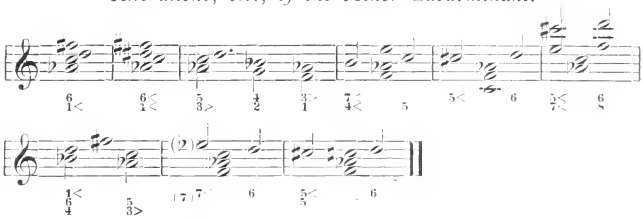
Alterations etc., in the D^7, $D^{9>}$ and D^9.



Alterations etc., of the Major Subdominant, S^6.



Alterations, etc., of the Minor Subdominant.



Only a very limited number of possibilities has been pointed out. Because it is exceedingly instructive, the student is requested to work out discordant formations of a number of major and minor chords of different keys. It will teach the student to unravel the most puzzling chord formations, and he will learn to refer them to their respective tonal functions in the key. Solely from this secure rock can any successful advance be made into the endless sea of possibilities. The student should from now on analyse the harmonic construction of compositions. At first, these should be simple songs, dances, lighter piano pieces, sonatinas, and gradually the works of Bach, Haydn, Mozart, Weber, Mendelssohn, Beethoven, Schubert, Schumann, Wagner, etc. should be thoroughly studied.

The following set of exercises is to be worked out in such a manner that every example, as much as possible, uses prepared dissonances on the accented beat. As before, work every example with figuration of the soprano, alto, tenor, bass and with figuration divided among the four parts. Remember the following in regard to the working out of these exercises:

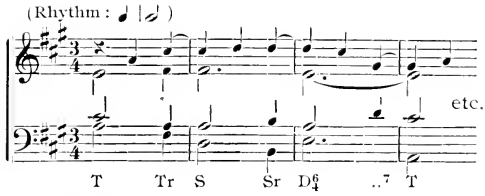
A) For the *preparation of the dissonance* a chord tone entering on the preceding unaccented beat will serve (the chord tone can be a prime, third or fifth of any major or minor chord, also the sevenths of major or minor Dominant chords or the sixths of major or minor Subdominant chords).

B) The *dissonance must move by step of a second.* Only the 6 of a major or minor S may proceed like a fundamental tone, when the S^6 *acts* like a D^7 of a D; see § 30.

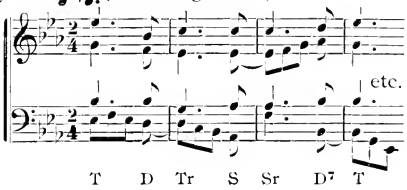
C) When the part to be figured offers no opportunity for the use of a prepared dissonance on the accented beat, the syncopation is to be continued by *tying a note common to both chords.* In such a case the syncopated part need not necessarily move by step of a second, but if possible may move to a chord tone which will give a prepared dissonance for the next accented beat.

D) In figuration of measures containing three beats, or where the figuration is to use three or more notes to each chord of the other parts, only the note immediately preceding the accented beat is to be tied. The syncopation is then only partial, as can be seen from the following short illustration.

Ex. 110.

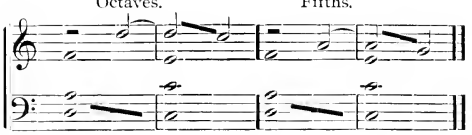


Ex. 111.



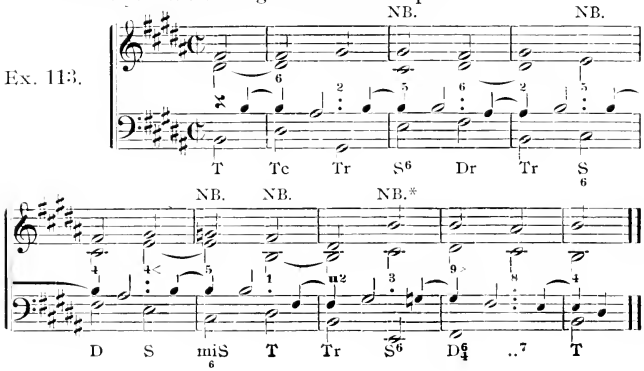
Because the syncopation merely delays a tone, consecutive octaves and consecutive fifths which would occur if the syncopation were not employed, are forbidden.

Ex. 112.



The following example will help to make the application of the rules clear. We will figurate the tenor part.

Ex. 113.



At NB., the syncopated tone on the accented beat is a chord member and a chord tone follows. At measures 2, 3 and 5, the same tone is used, but at measure 5, second beat, another tone, and at NB* a chromatic alteration of the third takes the place of a mere repetition (miS instead of S).

EXERCISES. (For syncopated figuration.)

(135) 𝄵: D^7 | T Tr | miS T | D^6_4 ..^{7} | T Tc | D^6_4 ..^{7} | Tvc miS | D S | T

(136) $\frac{3}{4}$: mS^6 | mT mTr | mD mT | $mS^{3<}$ maD | mTr mT | maD mD | mDc mS | mS^6_5 maD | mT

(137) $\frac{2}{4}$: T | D^7 miS | T S D Sr | DD D | Tr D | Tvc miS | D^6_4 $\frac{5}{3}$ | T (Figurate like Ex. 111.)

(138) 𝄵: mT | maD^7 mT maD^7 mS | mT maD mS mSr | (Figuration ♪♪ ♩ ♩ ♪♪) mTr mDr mS ..^{6} | mTr maD mT

(139) $\frac{3}{2}$: T | S^6 D T | D Dr T | miSc S T | Sr D T | (Figuration ♩ | 𝅗𝅥 𝅗𝅥 𝅗𝅥 𝅗𝅥 | 𝅗𝅥) D ..$^{3>}$ miS | T Tr Sr | D^6_4 $\frac{5}{3}$ ..^{7} | T

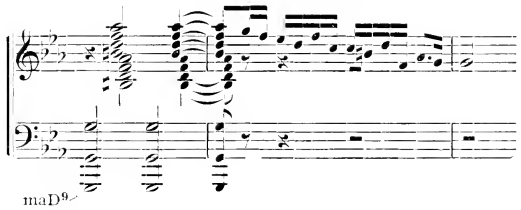
(140) $\frac{3}{4}$: maD maDc | maDr maD | mDD maD | mTc mT | maD mD | mSc mS | $D^{6>}_4$ ..^{7} | mT

(141) 𝄵: mT mD mS^6 | mT mS maD mD | mDc mT mS mT | maD^7 mTvr mS^6 maD | mTv

(142) 𝄵: S^6 | D ..^{7} | Tr miS | Dc D | Tvc Tr | S Sc | Sr T | S miS^6 | T

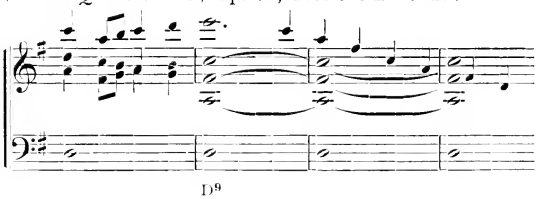
§ 66. DOMINANT NINTH CHORDS. The principal discords have been explained in § 28–30. It was pointed out that a seventh could be added to the D, § 28. Other seventh chords have been exhibited in the preceding paragraph as suspension or passing chords, etc. The only time any other seventh chords than D^7 may assume greater importance, will be shown in the paragraph on "Sequences." The D^7 borrows its added tone from the S, the seventh is the 1 of the S. The Dominant Ninth chord (D^9) borrows the 1 and 3 of the S, (in C-major it is G b d f a), and since we have a miS, this chord has a "sister" in the major key, when it borrows the 1 and 3 of the miS (in C-major, G b d f a♭), the $D^{9>}$. The minor key has only one D ninth chord, namely the maD chord with minor ninth (maD$^{9>}$). These chords are used with great freedom. Schumann begins his Overture "Genoveva" with this chord:

Ex. 114.



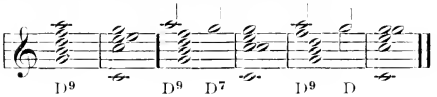
Haydn, in his Quartet in G, Op. 76, uses the D^9 thus:

Ex. 115.



Being derived from the D the D^9 chord has the same qualities as the Dominant, and resolves like it to the T.

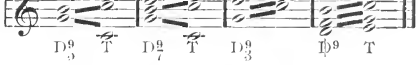
Ex. 116.



In § 31 the fact was mentioned that the dissonant tone of a principal discord may be used and then be dropped without requiring a subsequent resolution, and thus the 9 can disappear without resolution. See Ex. 115. In four part harmony one of the notes has

to be omitted. As usual, the fifth can be most readily spared, but the third and seventh can be left out, very often the prime is omitted. The leading of parts will decide which is the best for each case.

Ex. 117.



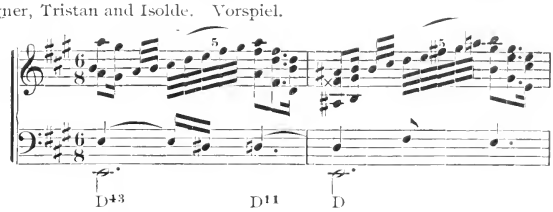
Generally, the tones have to be kept well apart. The chord is particularly well adapted for instrumental music. It sounds best with the prime in the bass, although other tones can be used. The omission of the prime of the Dominant chord with lowered (minor) ninth, $\flat^{9>}$, produces the familiar "Diminished Seventh Chord", see § 79.

Other ninth chords than these must be explained as suspension or passing chords and sometimes as sequential chords (§ 73).

§ 67. Very rarely will it become necessary to employ that formidable looking chord, the DOMINANT ELEVENTH CHORD (D 11). It is the Dominant with the 1, 3, 5 of the S superimposed. This chord has six tones, but usually one or two are missing. While some theorists deny the existence of this chord altogether, others have tried to explain the entire key by means of the Tonic chord and this Dominant eleventh chord. There are tone combinations which are explained satisfactorily only by referring to this chord. It is one of those chords which directs attention to Organ point formations. It has the characteristic of all principal discords that the 11 can disappear without resolution.

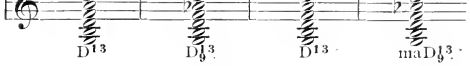
Wagner, Tristan and Isolde. Vorspiel.

Ex. 118.



§ 68. DOMINANT THIRTEENTH CHORD. To the chords of the D^{11} treated of in the preceding paragraph, another third, either major or minor, can be added. As each major and each minor thirteenth can have a major or minor ninth with it, it follows that there are four varieties of the chord.

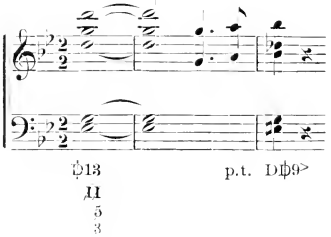
Ex. 119.



As a matter of fact these chords never appear in their complete shape, partly because some of the tones form harsh dissonances with one another, and partly also because most music is written in four-part harmony, where at least three of their tones must be omitted. In many cases all of the lower part of the chord is wanting. Sometimes only three tones of the chord appear.

Wagner, Tristan and Isolde. Act II. Introduction.

Ex. 120.

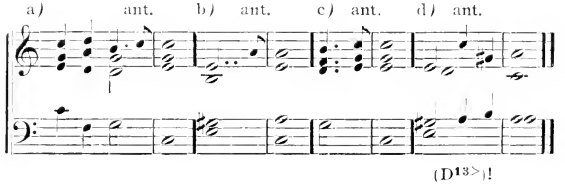


Compare Ex. 137.

In the majority of cases the chord of the thirteenth may be treated as a suspension chord. Still there are instances in which the movement of the tones is such (skipping from tone to tone or letting one disappear unresolved) that the chord must be looked upon as a fundamental discord.

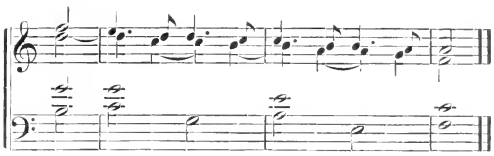
§ 69. ANTICIPATION. The anticipation is to some extent the reverse of the suspension, although not so important as the latter. The suspension delays a tone of the chord already sounded, while the anticipation precedes it. The suspension is placed on the accented part of the measure or beat, the anticipation on the unaccented part. The anticipated tone may be reached by degrees (a) or skips (b). It generally occurs on notes of short duration, and usually appears in the upper part, but it may occur in any part, or all.

Ex. 121.



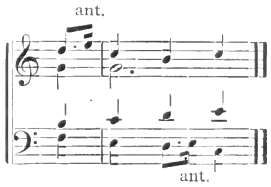
The anticipation may occur in several parts (see c). At (d) there is an interpolated tone of the sounding harmony between the anticipation and the chord to which it belongs. Suspension and anticipation can occur simultaneously in one and the same chord:

Ex. 122.



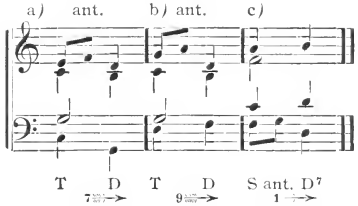
As anticipation any tone of the following chord may be used, the anticipation may move therefore to another tone of the chord at the time the chords change.

Ex. 123.



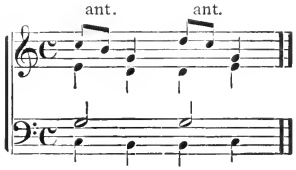
Sometimes the anticipation may be a tone which does not occur in the following chord, but nevertheless could belong to it.

Ex. 124.



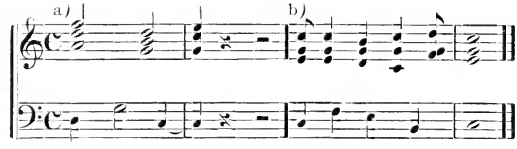
Nothing but an anticipation is the so-called *Nota Cambiata* which is an auxiliary tone below a chord tone and from which a skip into the next chord tone is made.

Ex. 125.



The anticipation can be used in a syncopated manner:

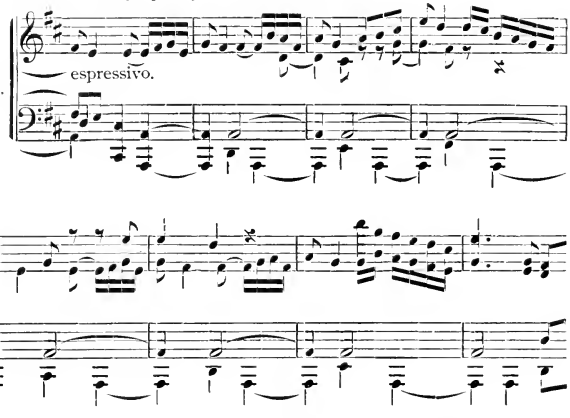
Ex. 126.



The following wonderfully exquisite melody of the great master displays anticipations, suspensions and mere syncopations. The student should find them.

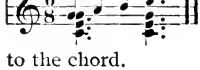
Beethoven. IX Symphony. Andante moderato.

Ex. 127.



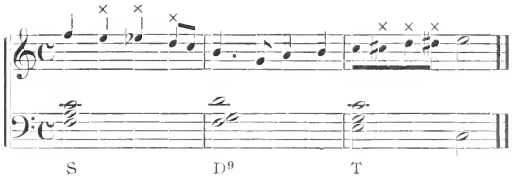
Sometimes even suspension or passing tones may be "anticipated."

§ 70. MELODIC EMBELLISHMENTS (Concluded). If two chord tones are a fourth apart, as for example, in ascending from the fifth to the octave of a chord there will be two passing tones between them. If the tones are farther apart, more passing tones



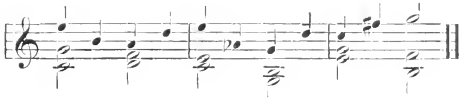
can be inserted. The passing tone is a tone foreign to the harmony, passing diatonically or chromatically between other tones belonging to the chord.

Ex. 128.



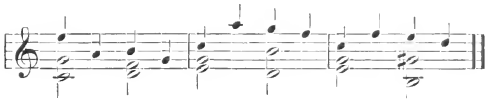
Passing tones may occur in several parts at the same time. Passing tones by skip can appear thus :

Ex. 129.



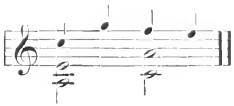
These passing tones are merely the neighbor tones to the ones which follow. Another kind of passing tones by skips consists in laying hold of the neighbor tone in the opposite direction to the tone which follows :

Ex. 130.



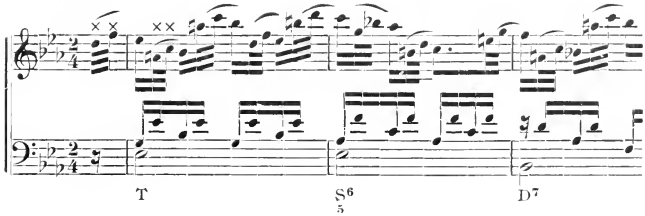
Even a suspension tone could be embellished similarly :

Ex. 131.

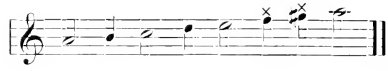


Circumscriptive passing tones (double appoggiaturas) consist of the lower and upper (or vice versa) auxiliary of any chord tone.

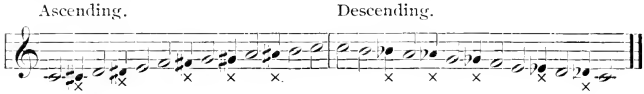
Ex. 132. Weber. Rondeau brillant.



The lower auxiliary tones used as embellishments sound usually best when they are a half tone step below the chord tone. The augmented second in the Harmonic Minor Scale will have to be considered as the result of the use of passing tones by skip.



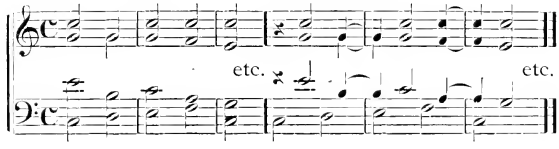
The Chromatic Scale is but a diatonic scale with chromatic passing tones, leading-tones to the diatonic tones.



The notation of the Chromatic Scale depends upon the key in which it occurs and upon the chord with which it is connected. The ascending Chromatic Scale has sharped (raised), the descending, flatted (lowered) tones.

§ 71. There is a kind of syncopation in which two or more parts merely *drag behind* the rest.

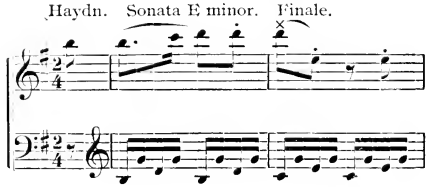
Ex. 133.



Compare the famous unisono passage in Beethoven's Overture "Leonora" (No. 3).

§ 72. DELAYED PROGRESSIONS. One or more parts may delay an expected progression, thereby forming tones foreign to the chord. These delayed progressions are altogether different from suspensions, as the parts may move by skips, which would prevent the use of suspensions, because these must resolve by degrees.

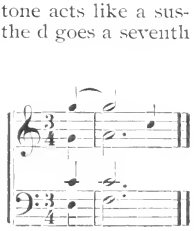
Ex. 134.



In the preceding illustration the delayed tone acts like a suspension resolved in the lower octave position (the d goes a seventh down to e, instead of a second up).

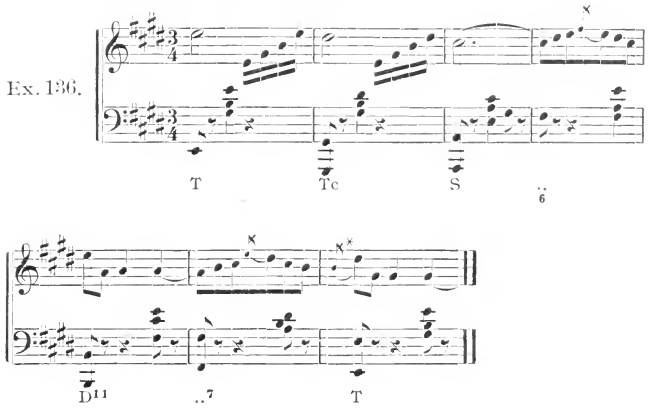
There are resolutions of suspension which are quite exceptional. For instance, when the suspension resolves by skip into another chord tone than the one it ought to. All these ornamental resolutions may be called elliptical resolutions of suspensions.

Ex. 135.



Puccini. The Bohemians. Second Act.

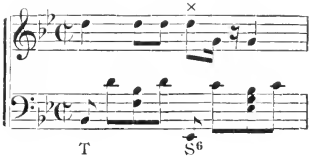
Ex. 136.



The d♯ is a suspension which is made to resolve to g♯ instead of e. In the following example the suspension tone d falls to g instead of going to e♭.

Schubert. Op. 142, No. 3. Impromptu.

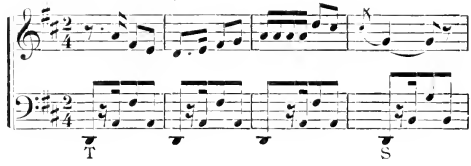
Ex. 137.



In the next illustration the grace note c♯ is a delayed progression and acts like a suspension which falls to g instead of going to d (or possibly b).

Bizet. Carmen, No. 5.

Ex. 138.

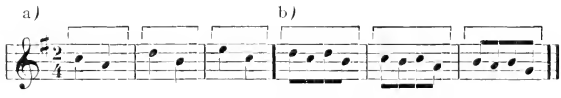


CHAPTER VI.

SEQUENCES, INTERMEDIATE CADENCES, PEDAL POINT ETC., ETC.

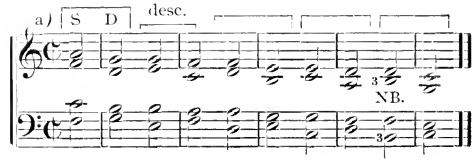
§ 73. SEQUENCES are the repetitions of a long or short motive (group of tones or series of chords) up or down the scale. The sequence is not really an harmonic, but a melodic formation, and so long as the sequence lasts, the harmonic functions are suspended, which explains why leading tones and dissonances may be doubled, etc. It is also here where other seventh chords than the Dominant seventh chord, seem to appear with equal rights, yet they have not the least tonal significance or influence, they are merely copies (shadows) of the chords in the motive. A sequence requires at least two repetitions of a motive. The series of chords used as a pattern must proceed logically and be faultlessly connected. The violation of rules that do occur in the imitation, are a mere natural result of the strong melodic current contained in a sequence, which is after all but a mechanical tranposition. The spirit of persistence prevails in a sequence. A sequence can even exist in one part.

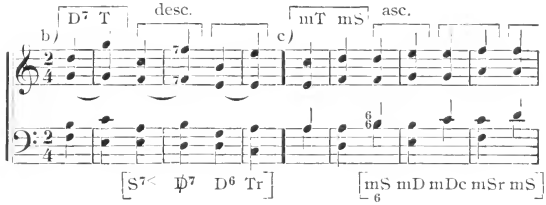
Ex. 139.



The following harmonic sequences (which are so many simultaneous parts) will explain what has been said.

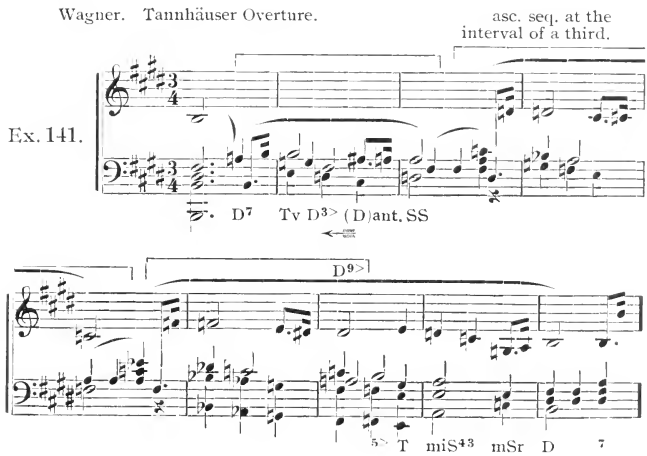
Ex. 140.





Because in the imitations of the sequence motive the tonal functions cease to operate for a time, there is no reason of trying to indicate them. Therefore we only mark the chords of the motive and mention whether the sequence ascends or descends. Brackets mean imitations and the number of blank brackets indicate the number of imitations desired. The extension of a motive is almost unlimited; any figuration in the motive may be accurately imitated. Yet the sequence has never been bound to strict exactness. Composers often produce fine effects by slight changes. Very interesting examples of this kind will be found in the first eighteen measures of Mozart's well known C-minor Fantasia (e Sonata). Sequences usually imitate at the interval of a second, but can do it also at the interval of a third or more. Very often they then move into other keys (see § 81 on Modulating Sequences). A beautiful illustration of such an one is given here, it contains an intermediate cadence (see § 74).

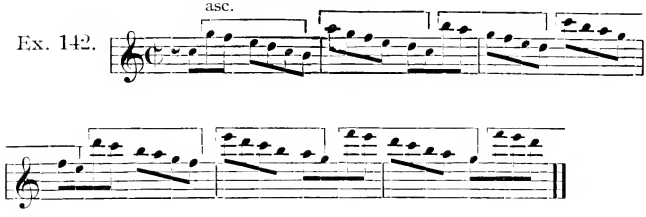
Ex. 141.



Excellent effects are also obtained when the length of the sequence does not coincide with the time of the measure, and thus the chords (or tones) which correspond with one another come on different beats of the measure.

Beethoven. Leonora Overture, No. 3.

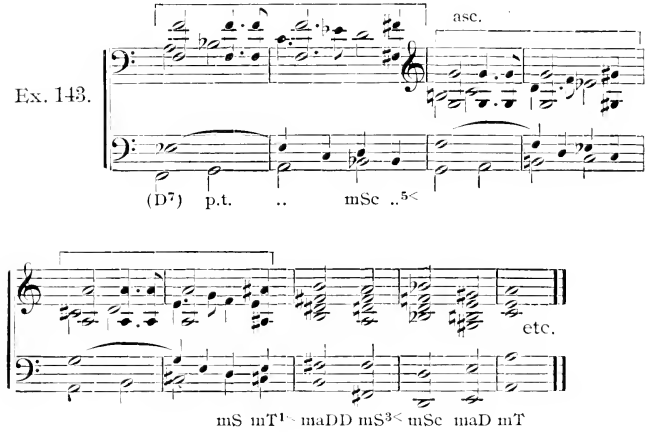
Ex. 142.



A fine example of an ascending sequence using the intermediate cadences (see § 74) is the following:

Wagner. Siegfried, Act 1, Second Scene.

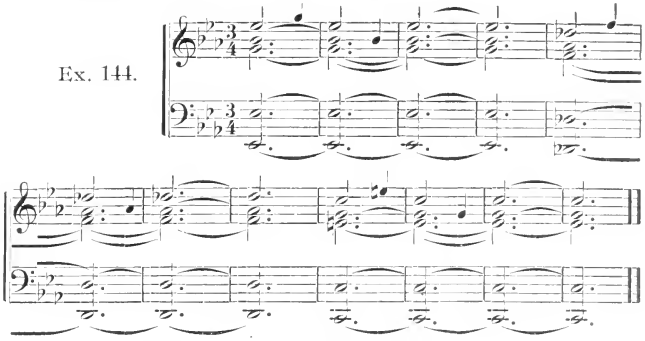
Ex. 143.



In moving from one phrase to the next, consecutive fifths or octaves resulting from the last chord of one phrase to the first chord of the following phrase are unobjectionable.

Beethoven. Symphony "Eroica." First movement.

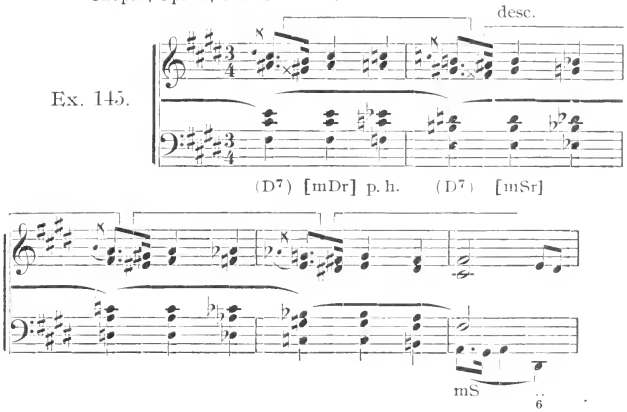
Ex. 144.



The next excerpt contains "passing harmonies" in the sequence, also fifths, see § 83.

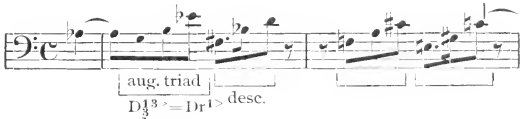
Chopin, Op. 30, IV. Mazurka.

Ex. 145.



Any discord can be used as a pattern for sequences. A very impressive succession is the series of augmented triads (see § 80) employed by Liszt in his Faust Symphony.

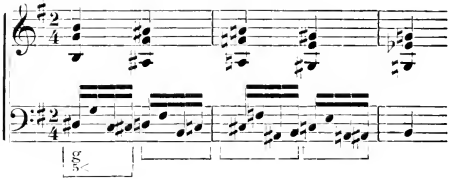
Ex. 146.



A similar example of a sequence of augmented triads is the following:

Wagner. Meistersinger, Act II, First Scene.

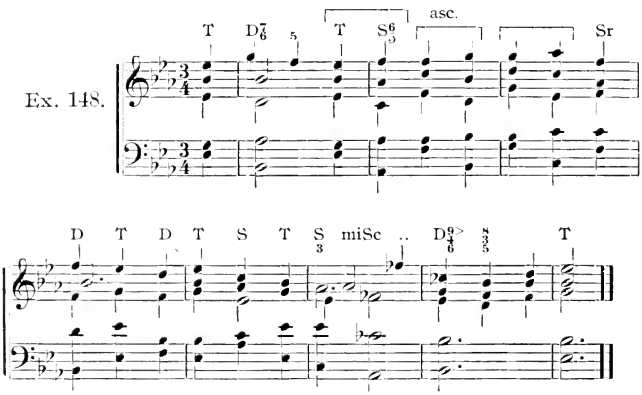
Ex. 147.



With great freedom in the figuration, the chord tone g is used instead of the chord tone b which is nearest to the passing tone; and similarly in all the chords following. In § 72 it was shown that a suspension tone can be made to resolve by skip to another than its proper and expected chord tone. In the illustration above, a similar liberty of progression occurs in that the passing tone does not issue forth from the nearest chord tone but by skip from some other member of the chord.

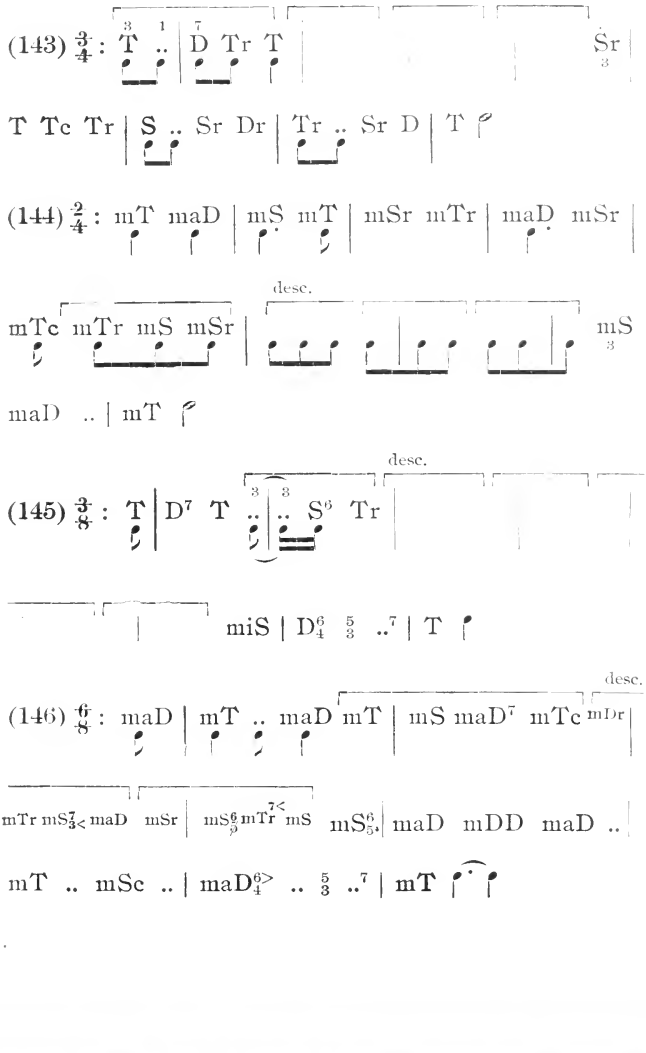
With the following exercises for sequences, the attempt at five-part writing will be made. The five parts are to remain within the same total compass retained throughout this text-book. The two lower parts may occasionally be distant an octave from the three upper; or the three lower from the two upper. Doubling of thirds and fifths will happen more often, but the former rules regarding them hold good. The following example may serve as an illustration.

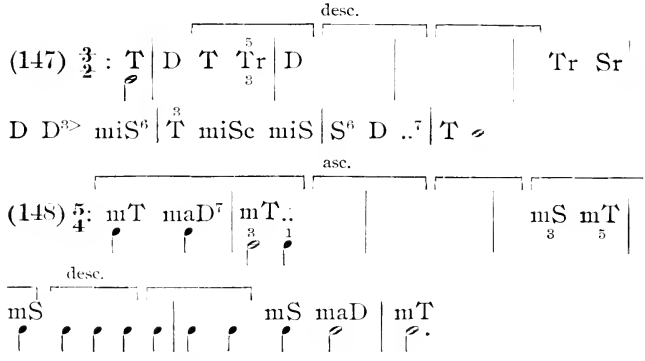
Ex. 148.



EXERCISES. (In five parts.)

Because it affords good practice in reading score, the student ought to work out these exercises on five staves; every part is to be on a separate staff.



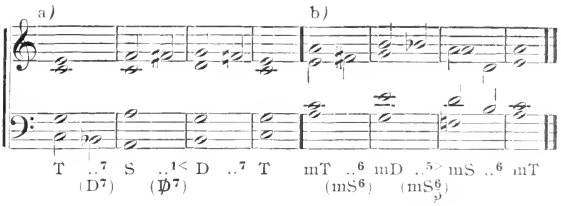


§ 74. INTERMEDIATE CADENCES. Some students may often have felt the avoidance of familiar chromatic alterations in the exercises as a restraint. Many of the successions developed in the following, may by experience have frequently entered their minds. But our aim was to develop the boundaries of the key to the utmost extent. A key is a circle of chords, and the student was taught to understand, in their relation to the tonic, chords apparently very remote from it. In this paragraph chord successions are introduced which are generally called transitions, not modulations. A modulation is the process of passing out of one key into another, meaning an actual change of tonic. Modulations, after all, are to be judged as harmony steps (chord connections) of which they are the reflex, that is the new tonics reached by modulation must always be understood similarly as chords within the key. A modulation is close when the new tonic reached is closely related to the tonic of the old key, a modulation is remote when the new tonic reached is remotely related to the tonic of the old key. Modulations have tonal functions in a higher degree or sense. In transitions, which we call Intermediate Cadences (or Middle Cadences) there is no change of any tonal function. The T remains the main center of the key, but in intermediate cadences the other chords (functions) of the key are made subordinate centers, surrounded by their circles of chords. It is similar to the solar system. The sun is the center of our planetary system, but some planets have their satellites, and these revolve around the planets as their center. The simplest forms of cadence, the connection of the tonic with its dominants of the same mode, are

T—S—D—T and mT—mD—mS—mT.

These will appear differently when we chromatically change a tone of a chord or add a tone foreign to the scale so that each chord becomes the dominant of the next :

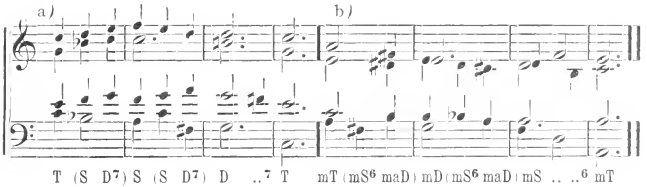
Ex. 149.



Indicating the alteration of tonal chords as passing tones by 7, 1<, 6 and 5> is, after all, the simplest analysis in this case. But in other cases the indication of chords as dominants of the following chord is the only correct mode of analysis, because it corresponds to the real course of thought, especially when more than one chord is referred to the next chord as tonic (center of that chord circle). Intermediate cadences are merely harmonic embellishments of tonal functions. Such relationship is indicated by placing the chord signs in *round* brackets, as we did in the lower row of Ex. 149.

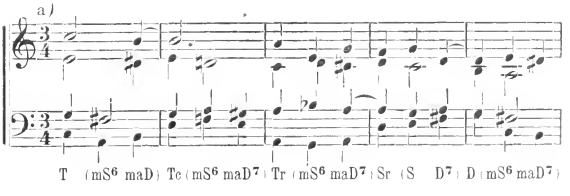
Chords which circumscribe the chord immediately following it, are always indicated as intermediate cadences by placing the chord signs in round brackets, and are not to be understood as referring to the tonic of the key.

Ex. 150.

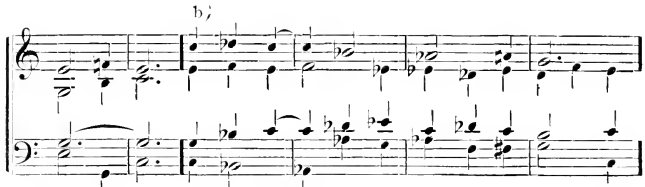


Since all relative and correlative chords may be made the bearers of intermediate cadences, a great variety of chord successions results.

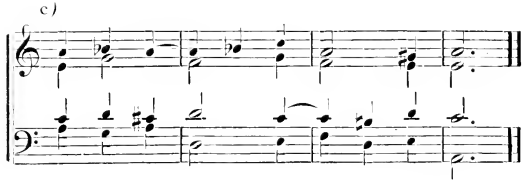
Ex. 151.



b)

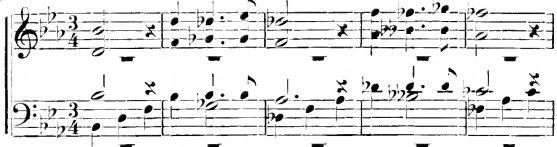


c)



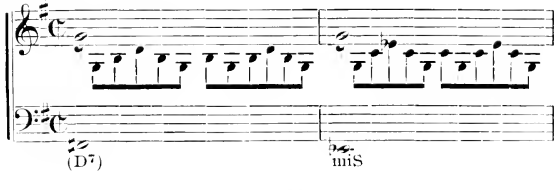
Wagner. Lohengrin, Act I, Scene 3.

Ex. 152.



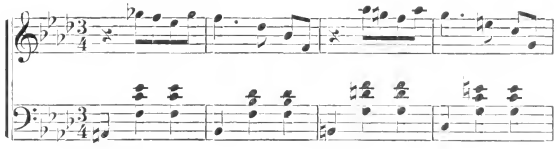
Schubert. Impromptu, Op. 90, III.

Ex. 153.



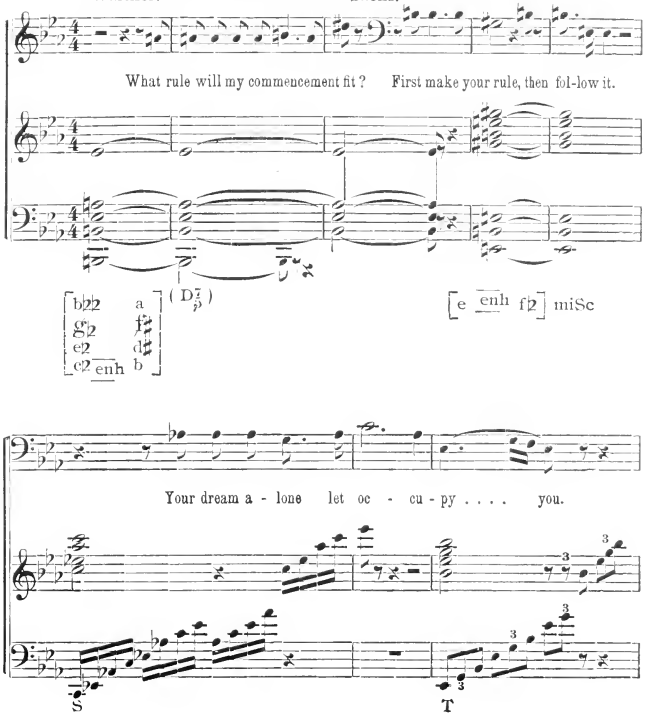
Tschaikowsky. Op. 37, No. 12. Christmas.

Ex. 154.



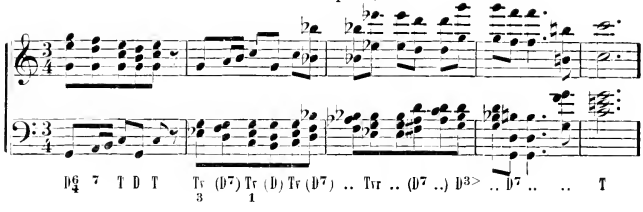
Ex. 155.

Wagner. Meistersinger, Act III, Scene 2.



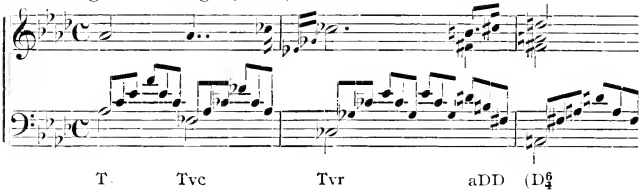
Ex. 156.

Schubert. Moments Musicals. Op. 94, No. 1.

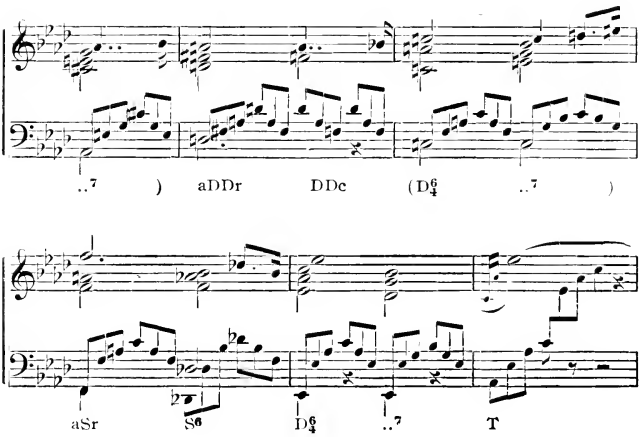


Ex 157.

Wagner. Lohengrin, Act I, Scene 2.

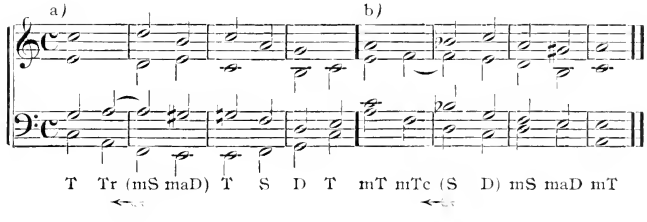


See Essay, page 15.



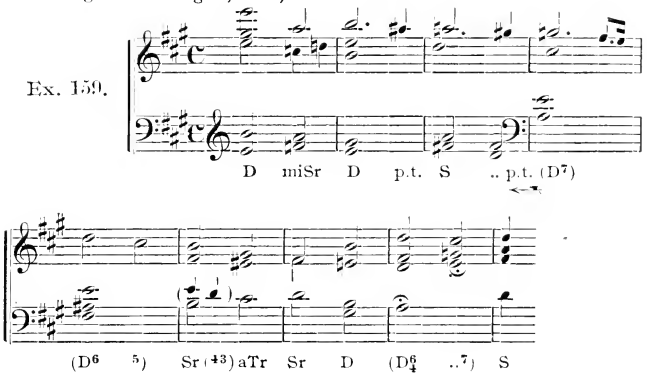
Sometimes an intermediate cadence follows a chord instead of preceding it. Then in place of the chord embellished (circumscribed) and expected to follow, another comes in. In that case an arrow pointing backwards is used to show that the chord before the bracketed chord succession is its tonic.

Ex. 158.



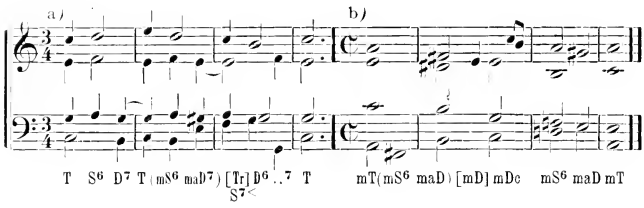
Wagner. Lohengrin, Act I, Scene 3.

Ex. 159.



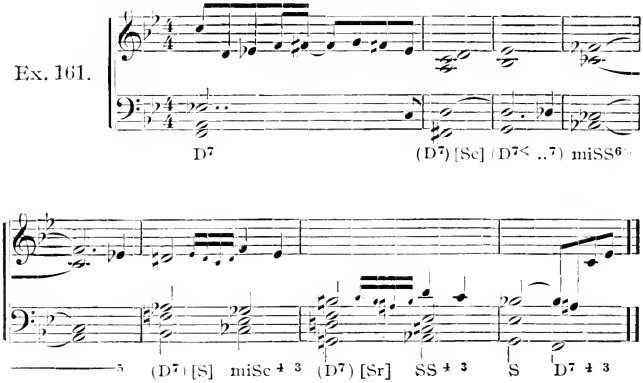
There are cases where the chord circumscribed by an intermediate cadence neither precedes nor follows, but is skipped and another chord comes in. The expected chord is indicated in *square* brackets after the round ones. The chord in the square brackets is therefore only the imagined tonic of the preceding intermediate cadence given in the round brackets, and is itself not used but skipped. But usually a chord nearly related to the skipped one follows.

Ex. 160.



Wagner. Meistersinger. Second Act, second scene.

Ex. 161.



All this shows that any tonal chord can be embellished harmonically (intermediate cadences are finally nothing but harmonic embellishments) by a Dominant with a 7 or a Subdominant with a 6 like the Tonic; and can also be treated like in a deceptive close, See Ex. 161, measure 6, or measure 7.

In order to read quickly the chord signs enriched by these new resources, and to have in mind at once the chord successions called for, the student must, whenever he comes to round brackets look directly to the chord after them (unless an arrow points backwards), and consider it as the tonic (center) of the intermediate cadence. The abbreviation enh in some of the exercises indicates an enharmonic tie.

EXERCISES.

(In four parts. Free use of figuration tones etc. permitted.)

(149) $\frac{3}{4}$: T | .. miS^{6} Tr | (D^{7}) miSc .. | D$^{6}_{4}$ DD ..^{7} |

D$^{9}_{7}$ | T (D^{7}) S | D^{9} | Tr miSr miS | T

(150) 𝄡: mT mTr | mD (D^{7}) | mS (D^{7}) | maD (D^{7}) |

mTr mS | (D^{7}) [mS] mSc | maD$^{6}_{4}$ | mT

(151) $\frac{3}{2}$: S^{6} | .. D$^{7}_{5}$ | T ..^{7} S | Dr (mS^{6} maD) |

Sr S (mS$^{6}_{5}$ | maD mS^{3} maD) | Tr ..^{6} (D) | S D$^{6}_{4}$ | T

(152) 𝄡: mT ..^{3} | mS ..^{1} | D ..^{7} | mTv mT | mD (mS^{6} |

maD^{7}) mS | mS$^{3}_{5}$ maD^{7} | mTv

(153) 𝄡: T | S ..^{7} | (mS^{6} | maD ..^{7}) | Tr DD^{7} |

D T | Dc D | T .. | T

(154) 𝄡: mS | mT (Ø^{9}) | mD (mS$^{6}_{3}$) | mD (D) | mD mT |

(mS^{6} maD) [maDr] (D) [mTvr] (Ø^{9}) maDD^{7} maD | mT

(155) 𝄡: T Tv | DD (D) [Dr] | D^{3} (D^{7}) | S^{6} |

(mS^{6} maD) | Tc Tr | DØ^{9} D^{7} | T

(156) $\frac{3}{4}$: D$\not\emptyset^{9>}$ D ($\not\emptyset^{9>}$) | mTr (D Dr S) | mS ($\not\emptyset^{9>}$) mS |

maD (miS^{6} D) | mDr (S^{6} D^{7}) [mTc] | (mS^{6} maD$^{6>}_{4}$..^{7}) |

mS^{6} (D) maD | mT

(157) $\mathfrak{C}$: T (D^{7}) [Tr] | S (D$^{9>8}_{7}$) [Dr] | $\overset{3}{\text{Tr}}$ ($\not\emptyset^{9}$) DD^{7} |

$\overset{3}{\text{T}}$ S | DD^{9} (D^{7}) | Dr Sr | D$^{6}_{4}$ ..^{7} | T

(158) $\frac{3}{4}$: mT | mS ($\underset{5>}{\text{D}^{7}}$) | maD mT | maD ($\underset{5}{\text{DD}^{7}}$ |

D^{7}) [mTr] mS^{6} | maD mT | mTr (mS^{6} ..) | $\underset{3}{\text{D}^{5}_{6>5}}$ ..^{7} | mT

(159) $\mathfrak{C}$: D$\not\emptyset^{9}$ (D^{7}) [Dr] | Tvc miSc | (S) D^{7} $\text{T}^{4\leq}_{2\leq}$ $\frac{5}{3}$ |

$\overset{5>\overline{\text{enh}}\,3}{\text{D}}$ (miS^{6} | $\underset{5}{\text{D}}$ $\overset{7}{\underset{5}{\ }}$) | DD D^{7} | T

(160) $\frac{3}{4}$: mT maDD | maD (miSc D$\not\emptyset^{9>}$) [maD] |

maDr mT (D^{7}) $\underset{3}{\text{mSc}}$ (D^{7}) [mS] mSr | mTr (mS^{6} D^{7}) |

mTr (mS^{6} maD) | mDr (mS^{6} maD^{7}) [mS] |

mSc $\text{mS}^{6}_{1<}$ $\text{maD}^{6>}_{4}$ $\overset{7}{\underset{\ }{\ }}$ | mT

(161) $\frac{3}{2}$: T miSr (D) [Tr] T D | T .. S | $DD\not{9}^{9>}$ D .. |

Tr T S | .. .. .. | DD^7 D.. | .. .. | T

(162) $\frac{3}{4}$: mT .. mS^6 | .. maD mTc mSc=S miSr DD^7 |

D_4^6 .. .. | Tr = mS .. (miS^6 | D^7) mTr (D) |

maD_4^6 $D\not{9}^{9>}$ maD^7 | mT

(163) $\frac{4}{4}$: T $\not{9}^7$ | T (D^7) [Sc] | S .. | Tvr ($\not{9}^9$) (D^7) [mSr]

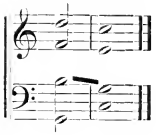
($D^{9>}$) [S] | (D^7) [SS] $D\not{9}^{9>}$ | D_4^6 .. | T

(164) $\frac{4}{4}$: maD .. | (miS^6 D) [mTr] | mT (mS^6

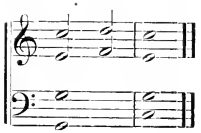
maD^7) [mS] | mSc mS^6 | $maD_{2>}^7$ | mT .. | $mS_{1<}^6$ maD mT

§ 75. VARIOUS RESOLUTIONS OF THE DOMINANT SEVENTH CHORD. In the D^7 chord the third most often ascends to its tonic, but sometimes it descends to the fifth when the bass ascends to the prime of tonic. The third of a D^7 chord is occasionally omitted. The seventh being so characteristic in this chord, makes the omission of the third hardly noticeable.

Ex. 162.

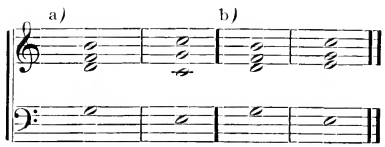


Ex. 163.



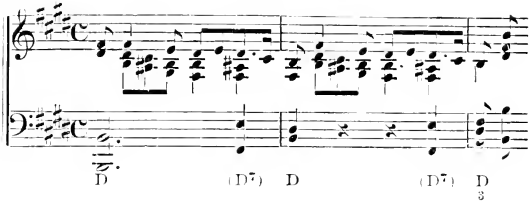
The D^7 can resolve to the tonic with the third in the bass, then the seventh will have to ascend:

Ex. 164.



Mendelssohn. Song without words, No. 9.

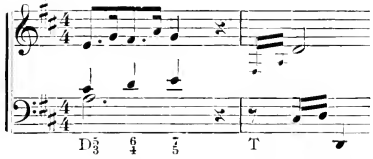
Ex. 165.



In instrumental music the tonic chord is sometimes treated as a sort of resolution in a lump of the mass of any of the discords built upon a major Dominant. The mass of harmony that follows is regular, although the progression of individual parts is free.

Haydn. Sonata in D.

Ex. 166.



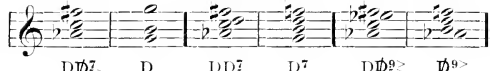
Here the 7 of the D is not resolved by degrees to the T, but the mass of harmony of the T follows the mass of harmony of the D⁷.

§ 76. In Modern Harmony any concord (major or minor) can be succeeded by any other concord, uniting especially well when there is a tone in common, but they can follow each other also when there is no tone in common.

The ultimate resolution of a discord into a concord can be constantly postponed, although the harmonies change. Any seventh chord (or other discord) can follow any other seventh chord (or other discord). Especially well, when there is a tone in common. Besides, the second chord may be resolved in another octave, or in any position whatever, that is "irregularly." This is one of the most modern devices for startling effects. Sometimes the chords are chained by enharmonic modulation, that is, a sharp in one chord may be tied over to a flat in the following chord, or vice versa, because the two notes represent the same sound. Successions of discords will naturally lengthen the periods of unquietude. In connecting discords the shifting of dissonant tones must proceed in half and whole tone steps. The dissonant tones, instead of resolving diatonically may either remain stationary, forming part of the new chord, or may progress chromatically. Sometimes the enharmonic changes are expressed in writing, and sometimes not.

§ 77. Some altered forms of the D^7, DD^7 and $D\flat^{9>}$ have been given special names: "Italian Sixth chord," "French Sixth chord" and "German Sixth chord." These "national" terms are unrational and useless.

Ex. 167.



§ 78. **MODULATION** (Continued.) "DIMINISHED TRIADS." In § 33 it was pointed out that the omission of the prime in the Dominant Seventh chord ($\flat^7$) and the omission of the fifth in the minor Subdominant sixth chord ($mS^6_{\flat}$, $miS^6_{\flat}$) produces the so-called "diminished triad." When the prime of any major chord is raised or when the fifth of a minor chord is lowered the same chord formation of a diminished triad arises.

$$c^{1<} = c\sharp\ e\ g,\quad am^{5>} = a\ c\ e\flat,$$

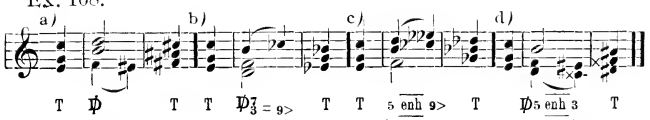
EXERCISE. Change by chromatic alteration every major and minor chord (the principal, relative and correlative chords) in the key into diminished triads, and let them proceed once as $mS^6_{\flat}$ and once as $\flat^7$. There will be two modulations from each diminished triad; and each modulation again, can go to a major or minor key. A few will not lead out of the key, and the thoughtful student will perceive why such is the case. Work in three part harmony.

$$T\ ..^{1<} = \begin{cases} \flat^7 & \text{In C major: c } ..^{1<} = \sharp^7 \text{ leads to d or dm key.} \\ mS^6_{\flat} & \text{In C major: c } ..^{1<} = cm^6_{\flat} \text{ leads to b or bm key.} \end{cases}$$

$$mT\ ..^{5>} = \begin{cases} \flat^7 & \text{In A minor: am } ..^{5>} = \sharp^7 \text{ leads to b♭ or b♭m key.} \\ mS^6_{\flat} & \text{In A minor: am } ..^{5>} = cm^6_{\flat} \text{ leads to g or gm key.} \end{cases}$$

A diminished triad is a symmetrically constructed chord in that it consists of two minor thirds. Like all symmetrically constructed chords it is adapted for enharmonic changes and consequently can produce modulations. The "Diminished Seventh chord" (§ 79) is the greatest favorite for such enharmonic modulations. Enharmonic changes are frequently used in modern harmony, but they ought not be indulged in to excess.

Ex. 168.



§ 79. **MODULATION** (Continued). "DIMINISHED SEVENTH CHORDS." These chords are characteristic and very effective forms of the D. Altogether the D and all chords derived from it are great favorites. The diminished seventh chord is usually a $D^{9>}$ with the prime omitted. The chord consists then of three minor thirds on top of each other, and is termed "diminished seventh chord" because that interval is found between its lowest and highest notes.

Diminished seventh chords can be made to arise by raising the prime of a D^7 or by lowering the fifth of a minor S^6 chord. In C-major D^7 $..^{1<} = \not{D}^{9>}$ ($g^7 - \not{f}^{9>}$) leads to a or am key. $miS^{\sharp 6}_5$ $..^{5>} = \not{D}^{9>}$ ($fm^{\sharp 6}_{5>} = \not{b}_2^{9>}$) leads to e♭ or e♭m key. In A minor $mS^{\sharp 6}_5$ $..^{5>} = \not{D}^{9>}$ ($dm^6 - \not{g}^{9>}$) leads to c or cm key. maD^7 $..^{1<} = \not{D}^{9>}$ ($e^7 - \not{c}_\sharp^{9>}$) leads to f♯ or f♯m key.

Diminished seventh chords may be formed at any time by merely raising the prime of a major chord and adding the seventh; or by lowering the fifth of a minor chord and adding the sixth.

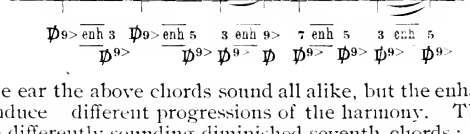
c e g — $c^\sharp$ e g $b_2 = c^{7<}_1$

a c e — $f^\sharp$ a c $e_2 = am^{5>}_6$

The student should thus alter every principal, relative and correlative chord in the key and find out to which major or minor key it leads.

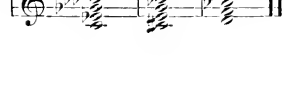
The diminished seventh chords have especial importance from their chameleon like qualities, that is the possibility of numerous enharmonic changes of meaning of single notes. Enharmonic changes are greatly indulged in in modern harmony. These chords, being built of three minor thirds on top of each other, are certainly very symmetrically constructed chords. This very symmetry makes them particularly adapted for enharmonic changes. The following will show that every diminished seventh chord equals four other diminished seventh chords.

Ex. 169.



To the ear the above chords sound all alike, but the enharmonic changes induce different progressions of the harmony. There are only three differently sounding diminished seventh chords:

Ex. 170.



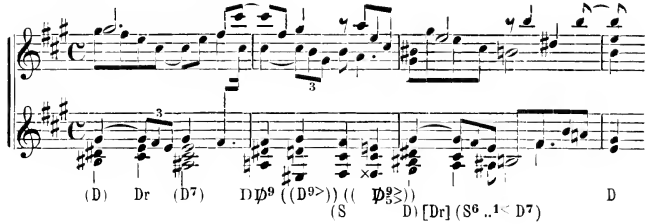
All the rest are inversions or only enharmonic changes of these. The student should change them enharmonically and find to what keys they modulate. This chord offers an easy means of modulation, but it ought not be used too freely, the too frequent use soon becomes monotonous.

Very fine examples of enharmonic modulations by means of diminished seventh chords are contained in Liszt's "Harmonies poetiques et religieuses" (Pensee des morts). It deserves careful analysis.

The $\not\!D^{9>}$ (diminished seventh chord) can also be used to embellish a D (or D^7) or any chord member of an Intermediate cadence. We indicate this in Analysis by placing two parentheses around such a chord sign thus: $((\not\!D^{9>}))$.

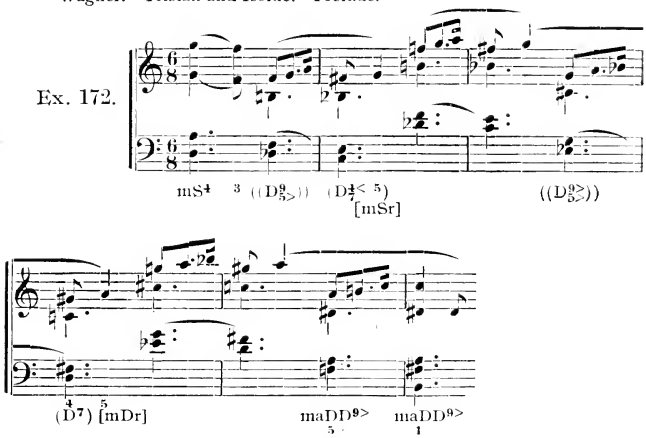
Ex. 171.

Wagner. Lohengrin Prelude.



Wagner. Tristan and Isolde. Prelude.

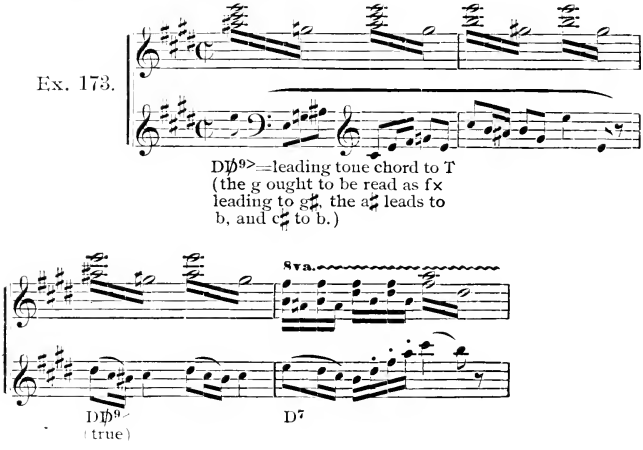
Ex. 172.



Often the $\flat 9$ seems to be but a "leading tone chord." The following excerpt illustrates where an apparent D$\flat 9>$ is but a "leading tone chord" and where it is a true D$\flat 9>$.

Wagner. Tannhäuser Overture.

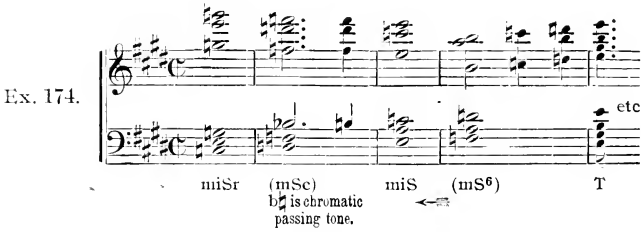
Ex. 173.



The chords most commonly used for intermediate cadences are the D^7, miS^6, S^6 and $\flat 9>$, but Wagner has even embellished chords by the correlative of the subdominant.

Wagner. Flying Dutchman. Act III, Introduction.

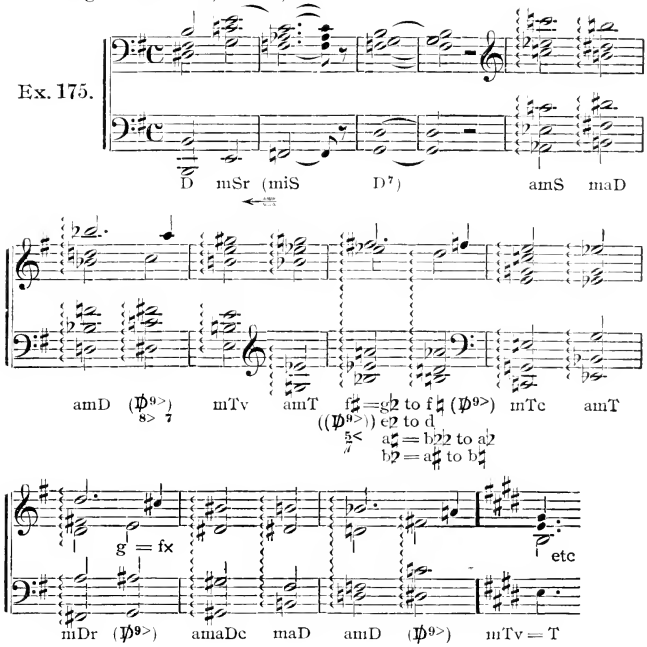
Ex. 174.



The following excerpt contains in measure 8 a suspension (or "leading tone") chord to the $\flat 9>$. Observe the chromatically descending melody from measure 5, and how the most distantly related chords are brought in succession.

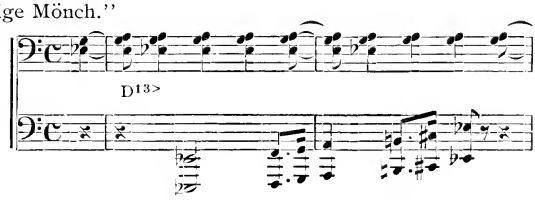
Wagner. Walküre, Act III, Scene 3.

Ex. 175.



Liszt has written a remarkable scale of whole tones in his "Traurige Mönch."

Ex. 176.



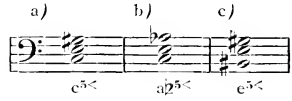
The piece ends in C-minor, the Tv. The scale of whole tones moves through the D13> chord in whole tone steps. According to sound c♯ is a whole tone from b and a whole tone from e♭2, but going to e♭2 the c♯ ought to be thought as d♭2. Altogether a highly interesting piece to analyse. Compare Ex. 86, from Liszt's Dante Symphony, where the bass moves in a whole tone scale.

§ 80. **MODULATION** (Continued). "AUGMENTED TRIADS." The augmented triad is the opposite of the diminished triad. In regard to its capability of inducing surprising modulations, it nearly equals the diminished seventh chord. It consists of two major thirds, the tones stand at equal distances from one another. When the fifth of any major chord is raised, or when the prime of any minor chord is lowered then an Augmented Triad is formed. It derives its name from the augmented interval found between the lowest and highest notes.

EXERCISE. Change every major and minor chord of a key into an augmented triad.

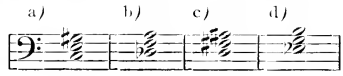
The symmetrical construction of the chord makes it particularly adapted for enharmonic modulations. The following enharmonically changed chords sound alike to the ear, but at a) the augmented fifth is in the highest part, at b) in the middle part, and at c) in the lowest part:

Ex. 177.



There are only four differently sounding augmented triads, all the rest are inversions or enharmonic changes of these:

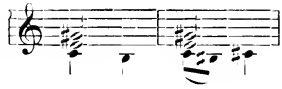
Ex. 178.



The student should change them enharmonically and find to what chords they would lead. The following will serve as an illustration.

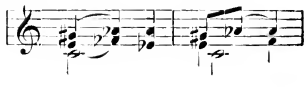
a) The bass tone is the dissonant tone (the tone that has to move):

Ex. 179.

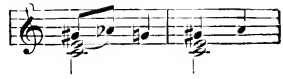


b) The third is the dissonant tone:

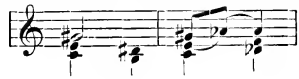
Ex. 180.



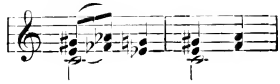
c) The fifth is the dissonant tone:

Ex. 181. 

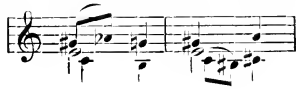
d) The fundamental and third are the dissonant tones:

Ex. 182. 

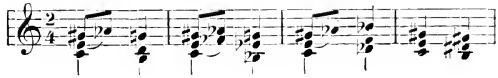
e) The third and fifth are the dissonant tones:

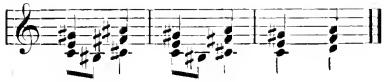
Ex. 183. 

f) The fundamental and fifth are the dissonant tones:

Ex. 184. 

g) All three tones may be considered dissonant. (The chord will then be a suspension chord.)

Ex. 185. 

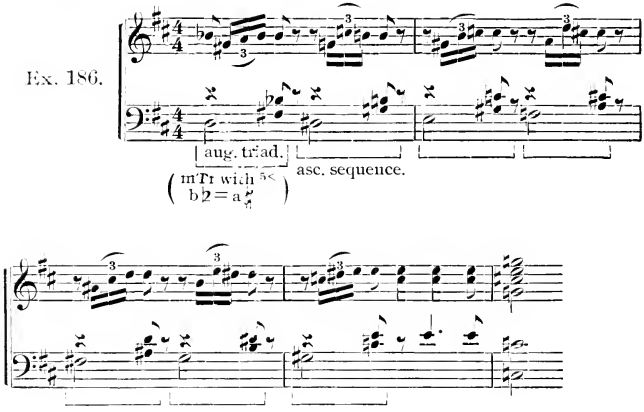


Only those tones of an augmented triad which are not to be considered dissonant may be doubled. Omitting a tone of the chord would naturally destroy its character and meaning.

The augmented triad may be succeeded by another discord. Every Dominant seventh can follow the augmented triad, if it is skillfully done. The student ought to try it. Then the student may also try to have every diminished seventh chord ($\mathbb{D}^{a>}$) follow the augmented triad. In each case will be found a tone common to both chords, which forms the connecting link or means of modulation. The augmented triad can also be embellished by suspension tones, etc. It is also possible to go from one augmented triad to another.

Wagner. Tristan and Isolde. Act I, Scene 5.

Ex. 186.

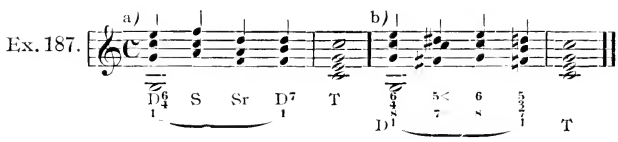


See also the examples Nos. 146, 147 and 143.

This chord has certainly an almost endless variety of possibilities and a wonderful flexibility.

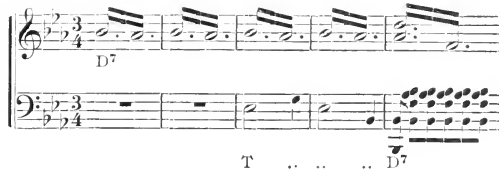
§ 81. PEDAL POINT or ORGAN POINT is the name for a prolonged bass tone, upon which is formed a series of chords which can also include passing chords foreign to that tone. Standing among themselves in correct connection the chords move more or less independently from the bass tone. Organ point formations are an extension of the harmonic apparatus and consequently this paragraph concludes the explanation of the most complicated tone combinations. Its name has been derived from organ music, where deep tones long sustained are played on the pedal key-board by the player's feet. The harmonic domain was in time extended, and long sustained tones (pedal points) are now also found in the middle and higher regions. The pedal tone when first sounded, or finally quitted, must be a member of the chord above it. The pedal point was undoubtedly developed from the D^6_4, which may be looked upon as the germ of the pedal point.

Ex. 187.



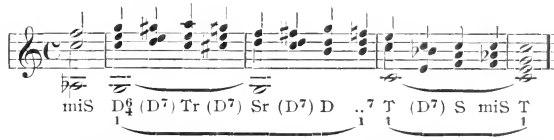
The most effective tone of the pedal point is the prime of the tonic, as an auricular illustration that all harmonies are thought of in connection with the tonic. The 1 of the D is a favorite bass for organ points. And sometimes the prime and fifth of the tonic are used, producing a so-called Double Pedal. A most exquisite example of this is Chopin's Berceuse, Op. 57. Even the 1 and 5 of the T and 5 of the D have already been employed as a Triple Pedal. In this manner even the D^7 has been used. The 1 of the S may also be used as bass. A pedal may occur in either an upper, middle or lower part. It is most effective as a bass. The other positions are named "inverted pedal." Then the famous passage in Beethoven's "Eroica" Symphony may be called a D^7 inverted pedal, with the T tones below it:

Ex. 188.



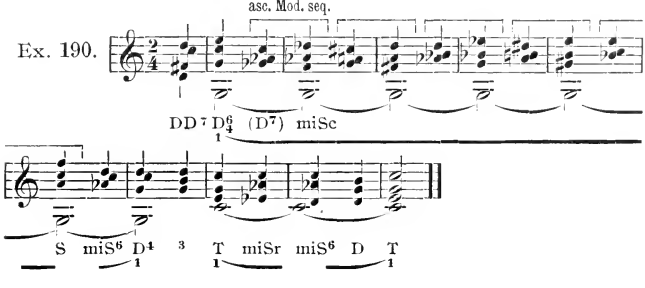
The spirit of unity pervades in the pedal point. The pedal point need not be merely sustained or repeated but may have any ornamental figure. In Analysis we separate the pedal, and indicate chords above it as we always did. The following example contains intermediate cadences.

Ex. 189.



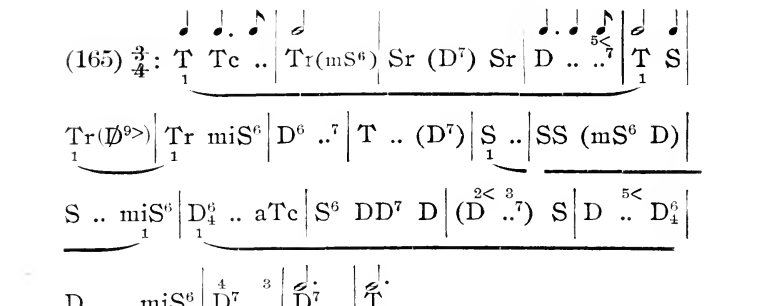
A modulating sequence (see Examples Nos. 141, 143 and 144) can be combined with a pedal point. This taxes the power for tonal perception to the utmost.

Ex. 190.



In a modulating sequence not only the melodic pattern but also the harmonic one is imitated, by having successions of functions repeated in other keys.

EXERCISE.



The u5 (underfifth) of the D is the prime of the T. In the second last measure of the above exercise the D^7 can be considered a suspension chord delaying tones of the tonic.

§ 82. **MODULATION** (Concluded.) Not only single chords but also single tones can be made the pivoting points of modulation. The different possibilities are:

1) a dissonant tone becomes a member of a concord, for example: c = c♯m,

2) a member of a concord becomes a dissonant tone, for example: c = c,

3) a member of a chord turns into a different member of another chord, for example: $\mathfrak{G}_3 = \mathfrak{G}_9$ (b is 3 and becomes 5), see § 79.

4) the dissonant tone turns into some other dissonant tone, for example: c = am.

There is an endless field of possibilities. All we have to remember is, that it is possible to change the meaning of a single tone (with or without enharmonic modulation) and make it the means of a modulation. The single tone can be (normal, raised or lowered) prime, second, third, fourth, fifth, sixth, seventh, even octave,

ninth or tenth within the new chord. By the intermingling of all the various artifices explained, by their association and combination among themselves in a thousand ways, there results the infinite wealth of modern harmony. Still a composer may always discover some new ingenious arrangement, or some unforeseen application.

The student should modulate from one major key to every other major or minor key, and from one minor key to every other minor or major key. He should also return to his original key, such return may be direct or circuitous. Employ as many of the resources of modulation as possible, and use embellishments where they come in naturally. Extend each modulation into a regular phrase, say four measures. Work in various rhythms.

Another mode is that of using a series (chain) of modulations between the key to be quitted and the one to be arrived at. Suppose a circuitous, or combined, modulation were divided into two sections, then the principal thing to observe is that the last step be a simple one; for instance, in going from C major to B major it is preferable to go to E major first, rather than touch upon G major and then go to B. In going from C major to D♭ major, A♭ major is a better bridge than F. There are modulations which go beyond the key aimed at, in order to make a return modulation (usually a Fifth step) for example C major—D major—G major.

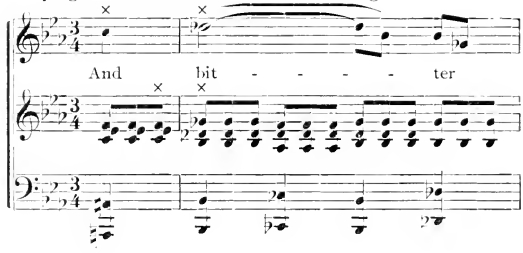
The student, who wants to become an accomplished musician, is urged to enter now upon the study of Counterpoint and Musical Form.

§ 83. CONSECUTIVE FIFTHS. The absolute prohibition of consecutive fifths is really a remnant of ancient times. In the 10th–13th centuries the oldest and most primitive kind of polyphonic music consisted of consecutive fifths, called Organum. But the strict regularity of moving in fifths was finally considered monotonous and a reaction set in prohibiting progressions in fifths altogether. About the 14th century the rule arose to avoid consecutive fifths and octaves, and it was pretty well observed until Beethoven's time, when he and others began to make distinctions between what was correct and allowable and what was not. This paragraph is not intended to encourage the pupil in writing fifths, but merely to explain to him under what conditions consecutive fifths are permissible. Forbidden consecutives are most objectionable in vocal music or in string quartets where each part stands out distinctly. In piano or orchestral music the bad effect is often lost in the mass of sound. (Compare § 16.) This rigorous rule of consecutive fifths is indispensable for the student. The great composers have found ways of using consecutive fifths to advantage, and derived from them good effects, as the following classification will show.

1) Consecutive fifths can occur under certain conditions. For example, when a song written for tenor (Ex. 191) is sung by a soprano, or when a song written for soprano is sung by a tenor. Innocent consecutive fourths are then turned into prohibited fifths.

Schubert. Dying Strains, No. 2, Warrior's Foreboding.

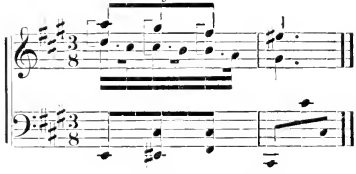
Ex. 191.



2) Consecutive fifths can recur upon the accented beat or accented parts of beats. They point to sequential formations.

Schubert. Sonata, A-major.

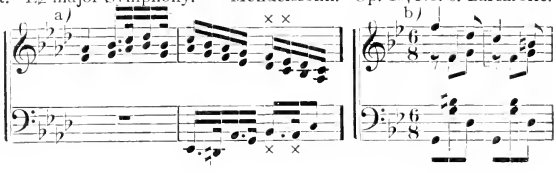
Ex. 192.



3) Consecutive fifths may be disguised by rests, suspensions etc., but they must be considered faulty where no relationship exists.

Mozart. E♭-major Symphony. Mendelssohn. Op. 19, No. 6. Barcarolle.

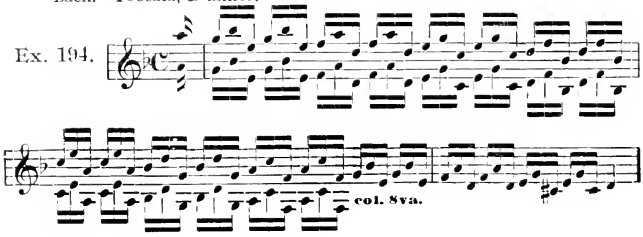
Ex. 193.



4) Consecutive fifths can occur in arpeggio'd chords in sequences.

Bach. Toccata, D-minor.

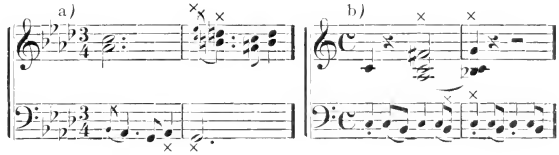
Ex. 194.



5) Consecutive fifths can occur by means of grace notes (appoggiaturas) auxiliary, passing tones, etc. Very numerous, usually unnoticable on account of the tones swiftly passing the ear.

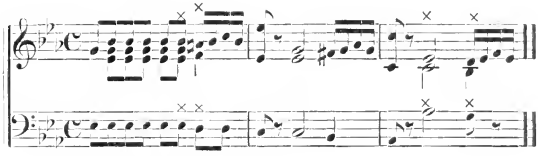
Ex. 195.

Weber. Invitation to Dance. Haydn. Military Symphony.



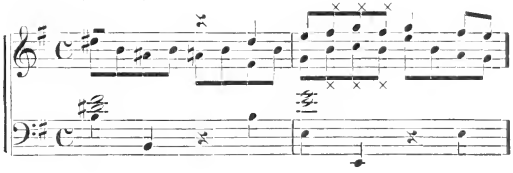
Ex. 196.

Mozart. Overture. Magic Flute.



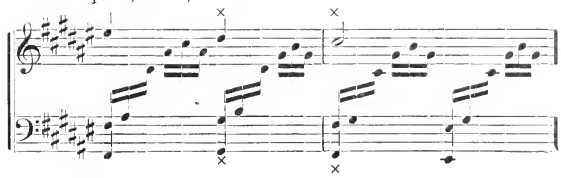
Ex. 197.

Gluck. Armide, Act II, Scene 3.



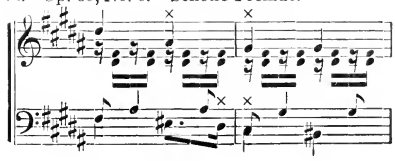
Ex. 198.

Schumann. Op. 28, No. 1, Romance.



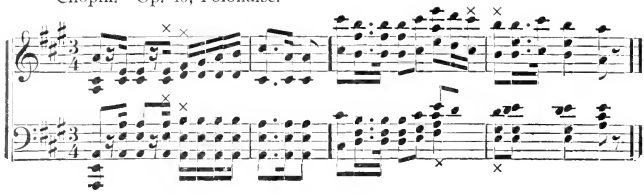
Ex. 199.

Schumann. Op. 39, No. 6. Schöne Fremde.



Ex. 200.

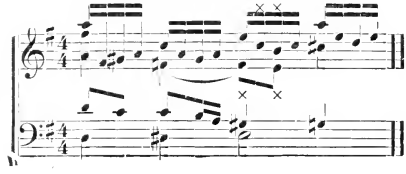
Chopin. Op. 40, Polonaise.



6) Consecutive fifths can occur when a certain figuration motive is persisted upon.

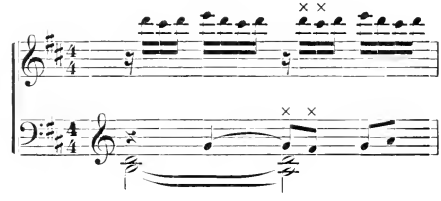
Bach. St. John-Passion, No. 25, Chorus.

Ex. 201.



Beethoven. Op. 10, No. 3, Sonata.

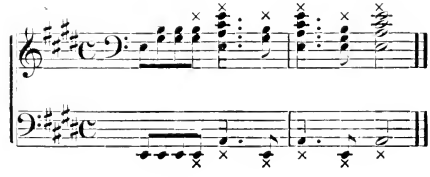
Ex. 202.



7) Consecutive fifths can occur between the Dominants and their Tonic.

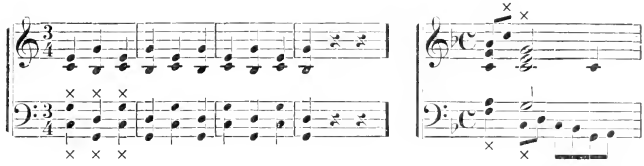
Mendelssohn. Overture. Midsummer Night's Dream.

Ex. 203.



Ex. 204.

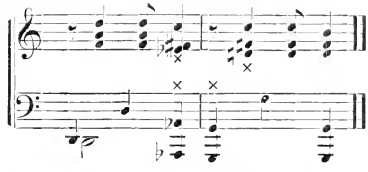
Chopin. Op. 24, No. 2, Mazurka. Schumann. Op. 15, No. 7, Träumerei.



8) Consecutive fifths are allowed in the resolution of the D^9, $\not D^{9>}$ and $\not D^{9>}_{5>}$ chords.

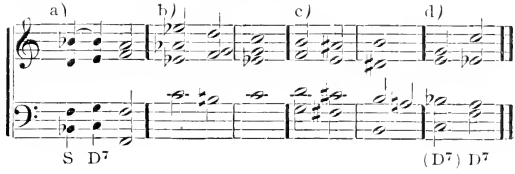
Schumann. Op. 15, No. 9, Kinderscenen.

Ex. 205.



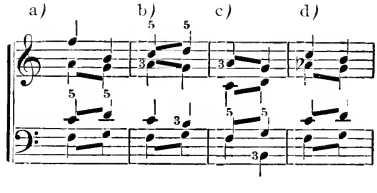
Consecutive fifths are also allowed between a S and a D^7, the sustained tone helps to conceal (counteract) the effect of the fifths, Ex. 206 a). Consecutive fifths may occur between two seventh chords when they are related, Ex. 206 d).

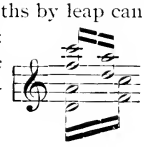
Ex. 206.



Consecutive fifths are occasionally excused between subdominant and dominant, when one of the tones forming the interval of the fifth in the second chord is brought in contrary motion to the consecutive fifths, or when the thirds of the chords are in different octaves and parts.

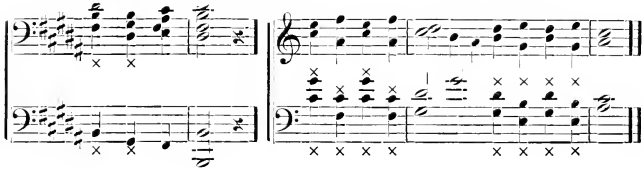
Ex. 207.



9) Consecutive fifths are allowed between the principals and their relatives. Consecutive fifths by leap can occur when the S^6 is brought in a broken form thus:  This sounds well because the ear does not perceive successions of fifths, but merely a rhythmical figuration of the entire S^6 chord.

Ex. 208.

Schumann. Paradise and the Peri. Liszt. "La Romanesca."

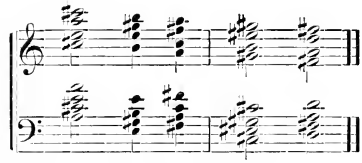


Chromatic consecutive fifths between T and aT or mT and amT can be seen in Examples 79, 80 and 81. The fact is that consecutives can occur between any related chords of a key, provided they do not contradict a rational leading of parts (voices). See also half tone consecutive fifths in Ex. 84 b) aDr to SS.

10) Some consecutive fifths and octaves are to be looked at merely as filling-in parts.

Beethoven. Op. 53, Sonata.

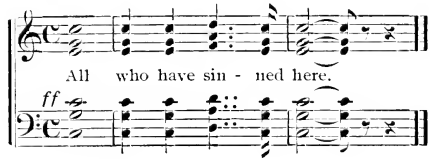
Ex. 209.



Take away in all the chords the three upper notes in the bass staff and the lowest note in the treble, and the consecutive fifths and octaves will disappear. The following extract is merely one melody (part) strengthened in octaves and fifths.

Gounod. Faust, Finale.

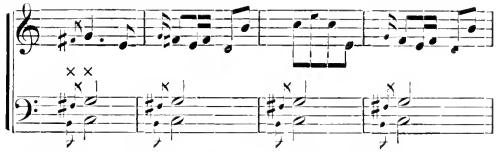
Ex. 210.



11) Consecutive fifths have been used as a means for expression and coloring. For instance in imitating the bagpipe :

Haydn. Symphony, C-major.

Ex. 211.



A beautiful piece of coloring of this kind is to be found in Puccini's "The Bohemians," where descending staccato fifths admirably represent the falling of snowflakes and the bleak winter winds.

§ 84. CONCLUDING REMARKS. The elaboration of Harmony is the work and thought of centuries. The masters with delicate artistic sensibility are the ones who make the advances in music by their refinement of feeling for Harmony and a boldness in accepting that feeling as a guide in contradiction to existing practice. Theorists endeavor to explain the results when all is accomplished. Only those rules that the masters themselves observe can be rules, and there are but a few absolute rules above time and taste. Studying the works of the master musicians and the works of the theorists of many schools and times, I have collected everything that might help the harmony pupil to better understand and enjoy the endless world of Harmony. I have aimed to select the best and most advanced ideas out of all methods, always searching for the most practical, the simplest, yet most comprehensive. I owe a great deal to the works of all distinguished, old and modern, theorists. Where I went farther than any, I did so upon the principle of analogy and the practice of modern composers. There is not a single statement made in this book which is not corroborated by scientific research of some great theorist, or by the practice of some master composer. Although different from the current books on Harmony, this method is, nevertheless, founded upon the most advanced ideas ever developed and scattered among many systems. A method which is to explain the intricacies of modern Harmony must naturally possess advanced ideas. I hope that my work of uniting the various advanced ideas (and some of my own) into a consistent method was not a labor in vain. The book itself will explain everything of the method. Should my work be considered a successful effort toward simplifying the system of Harmony, and of making the study of it profitable and an intellectual enjoyment, then I shall be happy to have contributed my share towards improving the teaching of one of the most fascinating subjects of music.

CARL W. GRIMM.

Cincinnati, July 20, 1901.

ALPHABETICAL INDEX.

(The numbers indicate the pages.)

CARL W. GRIMM'S

Revolving Chart of Harmony,

No. 1.

AN ingenious device to help the student in learning and the teacher in illustrating Harmony, especially Modulation and Harmonic Analysis.

The chart has a perforated part and a revolving disc. Over the perforations are marks indicating the key mode and the functions the chords have therein.

T	means the	major	Tonic	chord of the	major	key.
D	"	"	Dominant	"	"	"
S	"	"	Subdominant	"	"	"
mS	"	minor	Subdominant	"	"	"
mT	means the	minor	Tonic	chord of the	minor	key.
mS	"	"	Subdominant	"	"	"
mD	"	"	Dominant	"	"	"
maD	"	major	Dominant	"	"	"

This chart shows on the one half the principal chords of all the major keys (from C♭ to C♯), on the other half it shows all the minor keys (from A♭ to A♯).

The keys succeed each other in fifths. Turning the disc to the right will make the lower (flat) keys appear, turning to the left will show the higher (sharp) keys.

The chart shows all the principal functions any chord can have in the various major and minor keys.

Chart No. 1 is to be used in connection with *Part One* of the *Harmony*.

Published by THE WILLIS MUSIC CO.
CINCINNATI, OHIO.

AN ESSAY ON

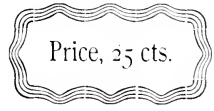
The Key-Extension of

MODERN HARMONY

BY

CARL W. GRIMM.

Read at the Music Teachers' National Association Convention,
Put-in-Bay, July 3, 1902.



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CINCINNATI, OHIO.

MODERN HARMONY

Is truly a wonderful world in itself. The more we explore it and the closer we examine it, the greater does its brilliant splendor appear. And yet it is but the revelation of nature's laws governing the relationship of tones; they are the same laws that are to be found in the smallest as well as in the greatest in the universe. These laws have always been in existence, but it was for man to discover them. The progress of constructing the now marvelously rich and complicated edifice of Harmony has been very slow, and has extended over a wide stretch of time. The condition of harmonic progress is a process of accustoming and training the ear to discern between agreeable and disagreeable, reasonable and unreasonable sounds. This is mental work, but the mental organism depends upon the laws of the universe. There is always a progress from imperfection to perfection, a striving towards development, because development is the order of the world. The idea of evolution is a universal process swaying alike nature's physical and man's art world.

There is unity in the Modern Harmony system. It developed by a natural growth; and, if there be any complexity of thought in it, it is as the structure of a tree or a human body is complex, only till the lines by natural growth in each are discerned, and then the idea of the whole becomes simple and plain.

Evolution—the process of becoming—is also mostly attended by a revolution. The ascending scale of progress from the simple to the complex is arrived at only by successive stages. And it is inertia in many to consider a past stage of music (be it Palestrina, Bach or Beethoven) the most perfect, and all later stages a succession of degradations. Many of the progressions which Beethoven used outraged the fixed notions of theorists of his day, who did not understand them, and thought he was violating their orthodox principles of key. Yet Beethoven's whole system was founded on his very acute feeling for Harmony. He expanded the range of key as much as he could, and Wagner went farther on the same path. The typical conservative mind regards any effort to change his habits of thinking or mode of feeling as a species of heresy. The stronger and more practical mind soon cultivates such heresies with much success. Naturally, growth implies also decay, that is the work of clearing the useless rubbish. No new teacher comes only to destroy, but also to build up. For that reason we ought always respect our predecessors for the preparatory work they have done. Just now, so many are discontented with the current harmony teaching. But this discontent is a token of a higher thing, the

entrance of a new spirit at strife with the old ; the darkness which may herald the dawn.

The masters, with delicate, artistic sensibility, are the ones who make the advances in music. Correct progressions come to them instinctively, but it must not be forgotten that this instinct is in part also the result of acquired knowledge. The artists select and reject by ear; they use tones and chords according to their inner sense of the relation which every combination of tones and succession of chords bears to the feeling. Many human beings understand even modern music, through their feeling for tonality, before they are capable of explaining it. Science, theory, always follows long way behind, only to confirm the progress achieved by the masters. The masters *feel* the inner bond of unity of new relationships of chords, long before science *sees* them. The possibilities of training the ear are unlimited. The ear is educated by exercising its perception of tonal relationships. Pratice and good will are necessary to thoroughly understand a great and complicated modern musical art work.

The guide through this seeming labyrinth of possible relationships of tones is the law of unity in the manifoldness, which is the greatest law of all art creations. The harmonic center of all chord relationships is their centralizing point, the chord of repose, called the Tonic. A key is but a family or kinship of chords.

Major chord and minor chord are the two foundation stones of harmonic structure. They are the only two consonant chords and are of opposite natures, the one sounds bright and strong, the other sad and serious.

If we look closely at the intervals of these chords, we find in the major chord a minor third above the major third :

g) minor third.
e) major third.
c

In the minor chord we find it reversed, namely a major third above the minor third : g) major third.
e) minor third.
c

The major chord consists of a major third and perfect fifth, the minor chord shows the same intervals if measured downward :

major third (g^ / e / c) perfect fifth major third (g / e v / c v) perfect fifth.

The minor chord is in its construction, the exact opposite and counterpart of the major chord. These two kinds of chords are co-equal in value and importance ; they express contrasting moods. The tones forming these chords coalesce (blend) into a perfect unity, and around these two chords all music revolves. All dissonant chords are to be conceived as modifications of major or minor chords.

Instead of regarding chords as capable of arrangement in one series like the steps of a ladder or like the alphabetical arrangement of words in a dictionary as all those Harmony systems built upon the thorough bass signature have done, the results of modern investigation compel us to dispose of them as if they were the twigs and branches of a tree. The source of all those everbranching and beautiful ramifications of the main branch is the tonic chord of the key. The tonic is the common root, whence spring, governed by the law of contrast, two main trunks, one representing the higher (Dominant) side and one the lower (Subdominant) side of the tone region; each dividing into a few main branches, these subdivide into multitudes of branchlets, and these into smaller groups of twigs, etc.

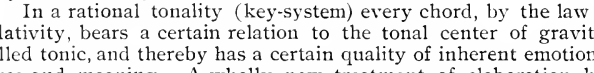
Since there are only two fundamental harmonies, the major and minor chord, and either one of them can be the tonic chord, it is plain, that there can be only two kinds of key systems, major and minor.

Modern harmony unifies, and in this sense it is one of the tokens of the modern spirit, which is that of centralization. If teachers seek to interpret what modern masters have accomplished, they will naturally arrive at new ideas and methods.

In a rational tonality (key-system) every chord, by the law of relativity, bears a certain relation to the tonal center of gravity, called tonic, and thereby has a certain quality of inherent emotional force and meaning. A wholly new treatment of elaboration has begun by classifying these chord successions, and pointing out to the student their various technical difficulties.

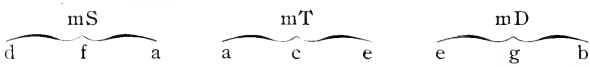
The new system of Harmony is founded entirely upon the relationship of chords by the Fifth and the Third. The relation of the chord to the key is called "function," and every chord has a function in the key. There are only three kinds of functions (offices) within a key, namely, Tonic, Dominant, and Subdominant. All the other chords will have to be considered as modifications (relatives) of them.

C-Major Key



The three principal chords, T, D and S, give the signature of the major key.

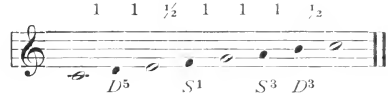
A-Minor Key. (Pure Minor Key.)



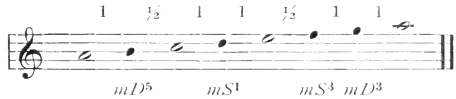
The three principal chords, mT, mS and mD, give the signature of the minor key.

A scale, generally speaking, is a series of tones arranged according to their pitch, into half and whole tone steps. Modern Harmony considers scales as broken chords, whose gaps are filled up with passing tones of the key.

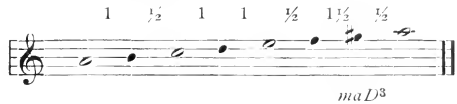
The C-major scale is a C-major arpeggio with the gaps filled up with the other tones of the key.



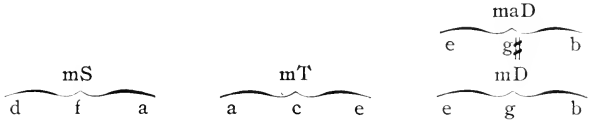
The A-minor scale is merely an A-minor arpeggio, whose gaps are filled up with the other tones of the key.



Modern taste is not satisfied with the old pure minor scale, but demands a leading tone to the octave in ascending the scale. In A-minor, therefore, a G♯ is wanted:

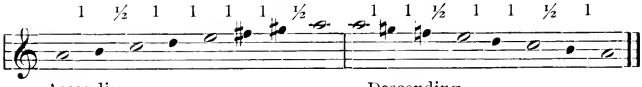


This is known as the Harmonic Minor Scale. It uses a note not in the signature of the key. Instead of a minor Dominant we get a major Dominant (maD), which brightens up the higher (D) side of the minor key. So, besides the mD, we can use also a maD in the minor key. At present, it is employed more than the mD. The major Dominant brings a major chord, that is, a foreign chord, into the key, sufficiently indicated by the fact, that the g♯ is not in the signature of A-minor. The mixed keys are a product of modern times, and were unknown to antiquity and the middle ages.



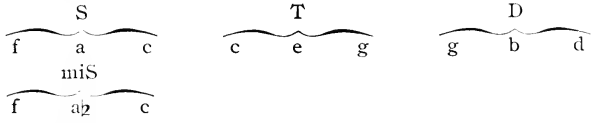
Because in the Harmonic Minor Scale the progression from the sixth to the seventh degree is unmelodic (difficult to sing on account

of the augmented second, 1½ steps) the sixth degree is raised, and in this manner the Melodic Minor Scale is produced:



Ascending. Descending.

The descending Melodic Minor Scale is the pure minor scale spoken of before; it is, therefore, still in use. The major key is bright and cheerful. The minor key is dark and sorrowful. The minor key is brightened by intensifying (brightening) its Dominant side by using a major Dominant chord instead of a minor. Just so, the major key is darkened (made sombre) by intensifying (darkening) its Subdominant side by using a minor Subdominant chord instead of a major. Major and minor are opposites, not only in the construction of chords, but also in the construction of keys; consequently, if we want to find the corresponding chord in the major key we must look for it on the reverse side of that of the minor key, and vice versa.

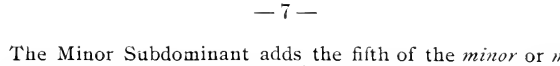


These are the principal chords of the key and represent the essential contents of it. Before we will point out the other concords of the key we will explain its most important discords. They are the dominants with additional tones, which help to mark them more pointedly as S or D. The added tones are tones borrowed from the other dominant. The Major Over-dominant adds the prime of the Subdominant (in C-major, g b d | f; in A-minor, e g♯ b | d). It is called *Dominant seventh chord* (D^7).

The Major Subdominant adds the fifth of the Dominant (in C-major, f a c | d).

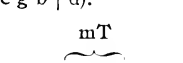
It is called *Subdominant sixth chord* (S^6).

The Minor Subdominant adds the fifth of the *minor* or *major* Over-Dominant (in A-minor, d f a | b; in C-major, f a♮ c | d).



It is called *minor Subdominant sixth chord* (mS^6, miS^6).

The Minor Over-Dominant adds the prime of the minor Subdominant (in A-minor, e g b | d).

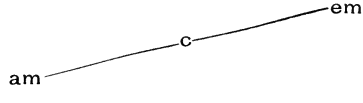


It is called *minor Dominant seventh chord* (mD^7).

Adding a tone of one dominant to the dominant lying on the other side circumscribes the key in the same way as does the succession of two dominants—it points to their tonic. Of these principal discords the D^7 holds the most prominent position, and from it develop the Ninth, Eleventh and Thirteenth chords. The mechanical idea that such chords as the D^9, 11 and 13 must, but cannot always be inverted with good effect, has caused much confusion in the minds of some theorists, and has led some to reject erroneously such chords altogether.

It is certainly a step forward if theory begins to free itself from the notion that the acoustical phenomenon of the overtone series can explain the nature of the major and minor chords. Acoustics has merely helped us to improve the construction of some of our instruments and concert halls. Perhaps the overtone series may be looked upon as the model for the D^7, 9, 11 and 13 chords, and give in music new meaning to the ancient theory that "the harmony of the world arises out of discord."

The principal chords of a key are related to each other by the Fifth. There exists another relationship of chords, and that is the relationship by the Third. For example, around C-major chord group themselves A-minor and E-minor chords:



We call A-minor chord the relative chord of C-major. E-minor is also a relative chord of C-major, but to distinguish it from the

other relative chord (A-minor), we call it the *correlative chord* of C-major. When the principal chord is major then the relative and correlative chords are always minor. The relative chord is situated a minor third below the prime of the principal (major) chord, and contains the prime and third of the latter:

Relative chord. { e, c, a } . . . . . { g, e, c } Principal chord.

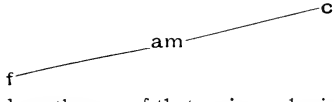
The correlative chord is situated a major third above the prime of the principal (major) chord, and a fifth above the relative chord. The correlative contains the third and fifth of the principal chord.

Principal chord. { g, e, c } . . . . . { b, g, e } Correlative chord.

The dominant and subdominant chords are a whole tone step (double fifth step, f—c—g) apart, and move around the tonic as their central point. The relative and correlative chords imitate this relationship within a smaller circle; they are only a fifth step apart, move around their principal chord, and can be used as substitutes for it.

This unfolding of a few simple laws is noticeable throughout the realm of harmony. Evolution, therefore, considers the higher or more complex forms of a key as following and depending on the lower or simpler forms of key.

Around A-minor chord group themselves C-major and F-major chords.



Here we find another proof that major and minor are opposites in all things. It has already been stated, that when the principal chord is major, then the relative and correlative chords are minor; consequently, when the principal chord is minor, then the relative and correlative chords are always major. With the major chord we found the relative situated a minor third below; here the relative of a minor chord is situated a minor third above the principal (minor) chord. C-major is the relative chord of A-minor chord. It contains the third and fifth of the principal chord:

Principal chord. { e, c, a } . . . . . { g, e, c } Relative chord.

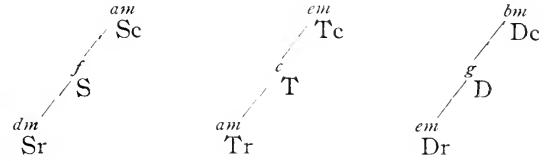
The correlative chord is a major third below the principal (minor) chord, and a fifth below the relative chord. F-major is the correlative chord of A-minor chord.

It contains the prime and third of the principal chord.

Principal chord.	e c a	. . . . .	c a f — Correlative chord.

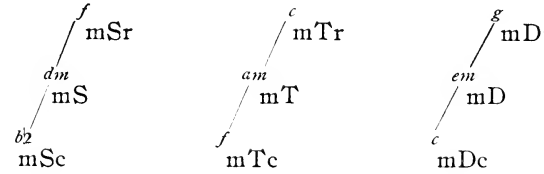
The relative and correlative chords of the Tonic are named Tonic relative (abbreviated Tr) and Tonic correlative (abbreviated Tc). The relative and correlative chords of the Subdominant are named Subdominant relative (Sr) and Subdominant correlative (Sc). The relative and correlative chords of the Dominant are named Dominant relative (Dr) and Dominant correlative (Dc).

C-Major Key.

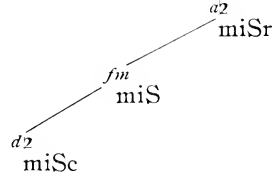


Notice that the Sc and Tr, the Tc and Dr are represented by the same chord. A chord can have two relationships, just like one and the same man can be a brother to one person and a son of another, or like one man can hold two offices. In the minor key the functions of minor Subdominant relative (mSr) and minor Tonic correlative (mTc) are held by the same chord, and so are the minor Tonic relative (mTr) and minor Dominant correlative (mDc).

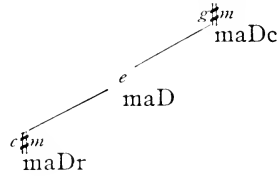
A-Minor Key.



The relative and correlative chords of the miS in the major key are called minor Subdominant relative and minor Subdominant correlative. In C-major key they are:



The relative and correlative chords of the maD in the minor key are called maDr and maDc. In A-minor key they are:



The third of the mS in the minor key can be chromatically raised, and the third of the D in the major key can be chromatically lowered. Apparently this gives the major key a minor D, and the minor key a major S. Nevertheless, they must be looked upon merely as licenses, and not as key-making (principal) chords. The artificial tones are supposed to lead to the third of the maD or miS; when they do not do this, then the progressions as musical ellipses require leaps in the conception. The raised third of the mS (mS$^{3<}$, the short crescendo sign < means "raised"), if used without modulation and without progressing to the 3 of the maD, will produce effects peculiar to the "Dorian mode" of the fifteenth to the seventeenth centuries. The lowered third of the D (D$^{3>}$, the short decrescendo sign > means "lowered"), if used without modulation and without progressing to the 3 of the miS, will reproduce the characteristics of the "Mixolydian mode." The mS$^{3<}$ illumines the minor key and the D$^{3>}$ clouds the major key, even when the naturally expected chords do not appear.

Keys have grown like the big cities, by and by they absorb the surrounding territory and extend beyond the original boundaries. It is the process of "lumping" or knitting together into a larger unity. A key can branch (reach) out above the dominant and below the subdominant and use the chords beyond without inducing a modulation.

C-Major Key.

b2	*f*	*c*	*g*	*d*
SS	S	T	D	DD
b2m	*fm*			
miSS	miS			

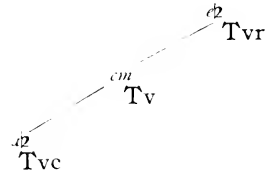
A-Minor Key.

			e	*b*
			maD	maDD
gm	*dm*	*am*	*em*	*bm*
mSS	mS	mT	mD	mDD

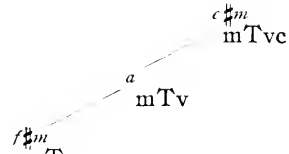
The extension of the key to the SS, and especially to the miSS, brings darker shades into the major key. The same holds good of the mSS in the minor key, whereas the mDD, and especially the maDD, bring brighter shades into the minor key.

The chromatic alteration of the third of the T produces a chord of the opposite mode; in C-major the c-minor chord, in A-minor key the a-major chord. This variation of the tonic puts it into another mood. Most beautiful effects are obtained by the use of the variants of the tonic. For the major key it is similar in effect to a cheerful landscape made dark and gloomy by a passing cloud. In the minor key the effect is the reverse, like a desolate scene made entrancing by sunshine. By using the variant of the tonic, the darkness in major, or brightness in minor, is cast over the entire key, and does not spread only over a part of the key, as with other chords, like the miS, SS, maD, etc. The tonic variants have relatives and correlatives.

C-Major Key.

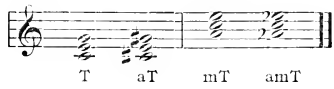


A-Minor Key.



In C-major key the Tvc (a2-major) is frequently used for deceptive closes.

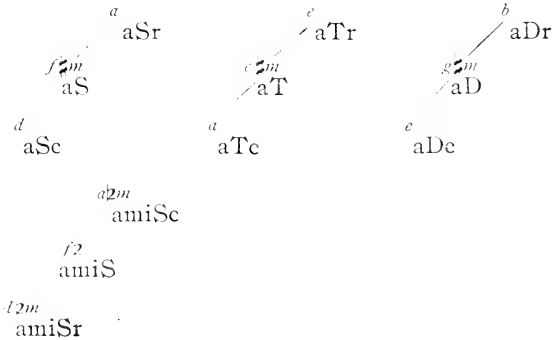
As the sense for chord relationship developed, a new series of chords was evolved within the key by a certain simultaneous alteration of the tones forming the fifths of the principal chords. For example, a major chord is changed into a minor by chromatically raising the tones forming the interval of the fifth (the prime and fifth, the "outer" tones); a minor chord is changed into a major chord by chromatically lowering the tones forming the fifth.



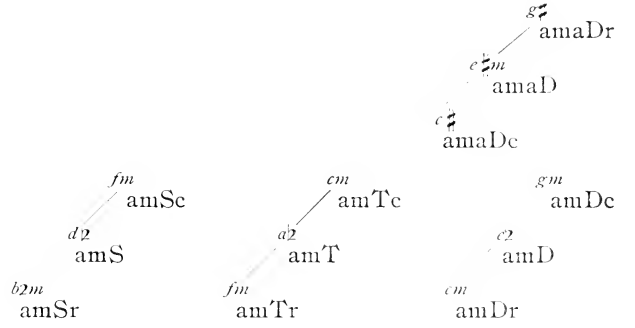
For short, we call these chords "altered" Tonic and "altered" minor Tonic chords. The tone which is the third of each chord forms the bond (connecting link) of the two chords.

These chords have their relatives and correlatives also, and appear more frequently than some would suppose.

C-MAJOR KEY.



A-Minor Key.



This "Variation theory" adheres strictly to the laws of logic and science. Just as in natural history, closely parallel varieties are often produced from distinct sources, but everywhere there is noticeable a transition from the uniform to the varied. Modern music is vastly more complicated than the ancient in the number of chords related to the same tonic. If musical people's sense of tonality were not by this time so highly developed, such successions would be merely hideous gibberish, and to some they seem so at first. Only by hearing, and thinking upon, these remote relations of chords do they become apparent to the mind. And then the gradations of the structure of key from extreme simplicity to very great complexity, and the relation of these graduated chords to one another are noticeable. "Variety is the source of joy."

Schubert, that lovable genius, was a great innovator in harmony. He may be considered the herald of modern, Wagnerian harmony, which employs so many chords that only this "Variation theory" can explain. Schubert would sing unconcernedly like a nightingale, more beautiful, the darker the night of bad fortune. Wagner would soar like an eagle, and screech like one even when no longer in the solitude of his exile. By the way, Wagner has composed a Centennial Festival March in honor of our American eagle!

Wagner by no means adopts licentious methods in the treatment of chords, and he is very far from ignoring tonality. Bach may be looked upon as the father of modern harmony. With his "Well Tempered Clavichord," Forty-Eight Preludes and Fugues, he finally settled and gave his full sanction to the division of the octave into twelve equal intervals.

The chromatic contents of the key have been more explored since the pianoforte became the world's music instrument, because

it afforded sufficiently accurate suggestions of the value and relation of the different chromatic tones. Thus it came that the piano has had a great influence in the development of harmony.

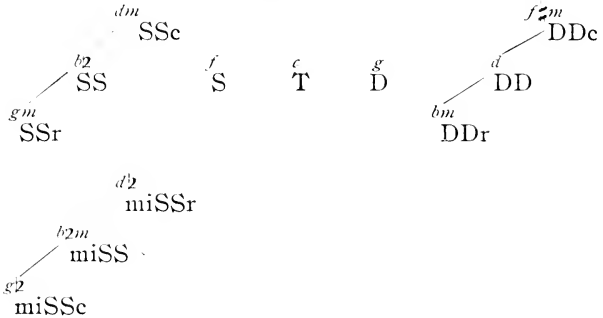
Now when we will explain the utmost extension of the key, the result will show that any key contains all the chords in existence. This does not mean that the bounds of the key have been broken; on the contrary, the feeling for key has been strengthened.

We know that Fetis, in an essay, read in 1832, put forth the hypothesis that some day the proof could be given that all chords were to be found in every key. This system of chord affiliation he called "ordre omnitonique." Liszt was present and was deeply impressed with the thought. So he began to make original innovations in this direction, and he has contributed a good many bold and characteristic harmonies, exquisitely tender and noble, demoniacal and religious. He made frequent use of enharmonic changes, and divulged the endless varieties of possibilities and wonderful flexibility of the augmented triad.

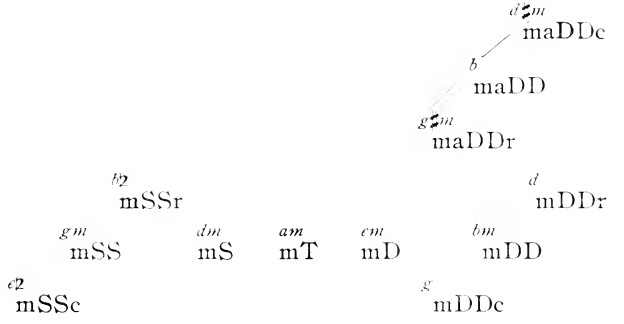
What I disclose now, I have omitted in my text book, "Modern Harmony," published in 1901, because I wanted convincing proofs in the master works to satisfy me of the correctness of the theory. Since then I have found numerous examples of such chords in the works of Berlioz, Liszt and Wagner, substantiating my ideas.

It has been pointed out that the keys branch out upwards to the dominant of the dominant, and downwards to the subdominant of the subdominant. These chords have relatives and correlatives issuing from them.

C-Major Key.

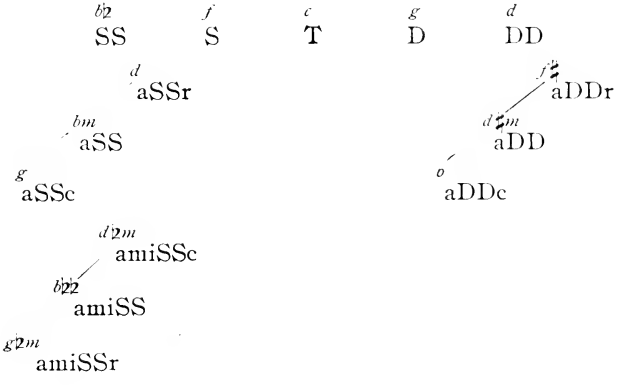


A-Minor Key.

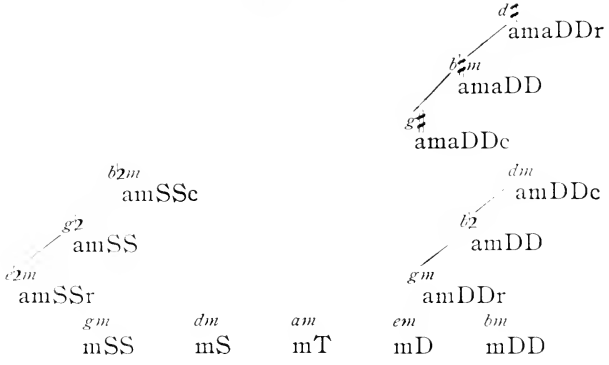


For the last we need only apply the principle of the "Variation theory," as shown in the explanation of the "altered" tonic, dominant and subdominant chords, to arrive at the extreme limits of chord relationship. Still there is fundamental unity among all the seeming diversities.

C-Major Key.



A-Minor Key.



A modulation is a change of key. It occurs whenever a new chord is made the central point of the tonal system. We break the bounds of the key, when we change the functions of harmonies; that is, when we treat any one of them as having a new meaning (function). The change of meaning of a chord can be made to occur also by means of dissonant tones, chromatic alteration of tones, enharmonic changes, etc.

There are chord successions which are generally called transitions, not modulations. In transitions, which we call Intermediate Cadences, there is no change of any tonal function. The T remains the main center of the key, but in intermediate cadences the other chords (functions) of the key are made subordinate centers, surrounded by their circles of chords, constructed on the same plan as the plain keys.

It is similar to the solar system. The sun is the center of our planetary system, but some planets have their satellites, and these revolve around the planets as their center. Every and any tonal function can have its own dominant and subdominant, and a great variety of chord successions results. The chords can circumscribe the chord immediately following it. Sometimes an intermediate cadence follows a chord instead of preceding it. Then in place of the chord embellished (circumscribed) and expected to follow, another comes in. There are cases where the chord circumscribed by an intermediate cadence neither precedes nor follows, but is skipped and another chord comes in. Usually a chord nearly related to the skipped one follows.

In modern music any concord can follow any other concord, even when only distantly related. Dissonant chords emphasize the harmonic movement and add to the appealing qualities of music.

Any discord can follow any other discord, even when not related to each other. Discords all have their source in some concord, and this root (bond of relationship) of the discords may be in some chord that does not appear at all. Analysis reveals all of that.

All music, even the simplest melody, rests upon an harmonic basis, either given or implied. Polyphony is melody multiplied, and is to be considered figurated harmony. For it is possible by such devices as passing tones, prepared and unprepared suspensions, alteration of tones occuring simultaneously to produce artificial chords of the most extraordinary description.

The main texture of the music in Wagner is something of the same nature as a fugue of Bach, in that the themes are interwoven throughout the music. Wagner repeats and repeats the same short phrase (leading motive) over and over again in such a way that it is not only not monotonous, but actually novel, and in some instances almost unrecognizable.

No study of harmony can be considered complete without an extensive course in Harmonic Analysis of numerous master works. Harmonic analysis increases the fund of knowledge and makes the musical sense more and more acute. It will produce beings who hear with the understanding as well as the senses, and raise them out of themselves into genuine rapture; for, as Goethe classed them, there are sensual, sentimental and intellectual listeners. Analysis teaches the laws of strict logic contained in chord successions, because it is always needful to consider what follows, as well as what has preceded. In order to test the intrinsic merit of the system that I have developed, I have analyzed every measure and note of Wagner's "Parsifal", and you are invited to look at this analysis. My reasons for selecting this work were the following:

"Parsifal" is the last and perhaps the greatest creation of Wagner. It occupies a special place among his works, and is filled to overflowing with his enthusiasm and devotion. "Parsifal" reveals Wagner's great genius in its purest emanation. The music itself is emphasized as a unit from the first measure to the last. Nothing surpasses this music of sorrow and pain, of hope and strength. It is exalted, grand and divine. The first act is solemn and religious. In the second gorgeous harmonies illustrate the tropical magic garden. The third begins sad and gloomy. The whole tone of this act fluctuates between woe and comfort, between despair and consolation. Everywhere there is refinement in the musical expression. The inexhaustible gradations of dissonant chord formations have been more firmly grasped than ever. There are seething discords of wildness and suspension chords more descriptive of agony and grief than were ever used; suffering and aspiration are most eloquently proclaimed.

The system that I have explained may be said to be the logical outcome of a serious study of the researches of all great theorists and the practice of great modern composers.

The theory of the relationship of chords by the Fifth and the Third and the theory of their "variation" (which is an indisputable fact), give us a simple and yet perfectly organized system, and forms the justification of the key-extension of modern harmony.

A method or system is, after all, but an instrument or a technical apparatus, and as this is the country where the genius of machinery dwells, it may not be wrong to expect from the American teachers the very best of methods yet to come.

We have come to this convention with the desire to learn something. The person who learns is the one who desires to learn, and the person who improves is the one who desires to improve. I, too, have come to learn whether you have a simpler and better system of modern harmony than I have expounded. If you have not anything better, or as good, then I will be glad to have been able to show you something, and to have contributed my little mite towards improving the teaching of one of the most fascinating subjects of music.

The following is a list of chords in Wagner's "Parsifal" (Kleinmichel's piano score), illustrating the extreme limits of chord relationship:

MAJOR KEY.

amiSS	page 251	brace 1	measure 1	
aSS	" 240	" 2	" 4	
miSSc	" 4	" 6	" 1	(enharmonic.)
	" 31	" 1	" 3	
	" 101	" 3	" 2	(partly enh.)
	" 190	" 1	" 3	
	" 241	" 4	" 4	
	" 241	" 4	" 4	
	" 250	" 4	" 4	
SSr	" 4	" 6	" 3	
	" 5	" 4	" 2	
	" 5	" 5	" 2	
	" 6	" 2	" 2	
	" 57	" 2	" 1	
	" 196	" 4	" 2	
	" 197	" 2	" 5	
	" 199	" 3	" 6	
	" 241	" 1	" 3	
	" 245	" 2	" 3	
DDc	" 193	" 3	" 6	
aDD	" 76	" 4	" 2	(enh.)
	" 186	" 1	" 2	(enh.)
	" 273	" 3	" 2	
aDDr	" 178	" 2	" 3	
	" 178	" 3	" 1	
	" 226	" 3	" 1	

MINOR KEY.

amSSr	page 117	brace 2	measure 1	
	" 256	" 2	" 2	(enh.=maDDc.)
amSS	" 32	" 4	" 4	
	" 112	" 2	" 1	
	" 118	" 4	" 5	
	" 237	" 3	" 3	
mSSr	" 44	" 2	" 3	
	" 44	" 3	" 5	
maDDc	" 263	" 4	" 2	
mDDr	" 167	" 3	" 4	
	" 255	" 1	" 5	
amaDD	" 236	" 3	" 1	(written enh. as amTc, but followed by maDD enh. written.)

For other, numerous examples from the works of the masters, with given analysis, see "A Simple Method of Modern Harmony."

CARL W. GRIMM'S

Revolving Chart of Harmony, No. 2.

An ingenious device to help the student in learning and the teacher in illustrating Harmony, especially Modulation and Harmonic Analysis.

The chart has a perforated part and a revolving disc. Over the perforations are marks indicating the key mode and the functions the chords have therein.

IN THE MAJOR KEY

T means the *Tonic* chord.
Tr " " *Tonic relative* chord situated a minor third below the Tonic.
Tc " " *Tonic correlative* chord situated a major third above the Tonic.
D " " *Dominant* chord.
Dr " " *Dominant relative* chord situated a minor third below the Dominant.
Dc " " *Dominant correlative* chord situated a major third above the Dominant.
S " " *Subdominant* chord.
Sr " " *Subdominant relative* chord situated a minor third below the Subdominant.
Sc " " *Subdominant correlative* chord situated a major third above the Subdominant.
mS " " *minor Subdominant* chord.
mSr " " *minor Subdominant relative* chord situated a minor third above the minor Subdominant.
mSc " " *minor Subdominant correlative* chord situated a major third below the minor Subdominant.
Tv " " *Tonic variant*, the tonic chord of the opposite mode.
Tvr " " *Tonic variant relative*, the chord situated a minor third above the Tv.
Tvc " " *Tonic variant correlative*, the chord situated a major third below the Tv.
D♭ " " *Dominant* chord with lowered third.
DD " " *Dominant* chord *of the Dominant.*
SS " " *Subdominant* chord *of the Subdominant.*
mSS " " *minor Subdominant of the Subdominant.*

IN THE MINOR KEY

mT means the *minor Tonic* chord.
mTr " " *minor Tonic relative* chord situated a minor third above the Tonic.
mTc " " *minor Tonic correlative* chord situated a major third below the Tonic.
mS " " *minor Subdominant* chord.
mSr " " *minor Subdominant relative* chord situated a minor third above the Subdominant.
mSc " " *minor Subdominant correlative* chord situated a major third below the Subdominant.
mD " " *minor Dominant* chord.
mDr " " *minor Dominant relative* chord situated a minor third above the Dominant.
mDc " " *minor Dominant correlative* chord situated a major third below the Dominant.
maD " " *major Dominant* chord.
Dr " " major *Dominant relative* chord situated a minor third below the Dominant.
Dc " " major *Dominant correlative* chord situated a major third above the Dominant.
mTv " " *minor Tonic* variant, the tonic chord of the opposite mode.
mTvr " " *minor Tonic relative*, the chord situated a minor third below the mTv.
mTvc " " *minor Tonic correlative*, the chord situated a major third above the mTv.
mS♯ " " minor *Subdominant* chord with raised third.
mSS " " *minor Subdominant* chord *of the Subdominant.*
mDD " " *minor Dominant* chord *of the Dominant.*
DD " " *major Dominant of the Dominant.*

This chart contains all chords related to each other in all the Major and Minor Keys, according to Modern Harmony teaching.

This chart shows on the one half all the major keys (from C♭ to C♯, on the other half it shows all the minor keys (from A♭ to A♯).

The keys succeed each other in fifths. Turning the disc to the right will make the lower (flat) keys appear, turning to the left will show the higher (sharp) keys.

This chart exhibits the different positions (functions) any chord can have in the various keys; by merely turning the disc to any key desired, all the chords belonging to it can be seen at a glance.

Chart No. 2 is to be used in connection with *Part Two* of the *Harmony.*

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EXAMINATION AND REVIEW QUESTIONS

FOR

MODERN HARMONY

BY

CARL W. GRIMM.

Although the questions are numbered consecutively, they have been arranged into groups, according to the paragraphs to which they pertain, and under their respective paragraph numbers.

§ 1

1. What are the three essential factors of music?
2. Give the meaning of each.
3. What is Harmony in its widest sense?

§ 2

4. What is an interval?
5. What kind of names have intervals?
6. Upon what do the numerical names of intervals depend?
7. How are intervals measured?
8. What is a half step? A whole step?
9. Name the three classes of intervals used in this method.
10. What is meant by a prime?
11. What is a "normal" or "major" second; how many half steps does it contain?
12. What is a "normal" or "major" third, and how many whole steps has it?
13. What is a "normal" or "perfect" fourth, and how many steps does it include?
14. What is a fifth? How many steps constitute a "normal" or "perfect" fifth?
15. What is a "normal" or "major" sixth, and how many steps does it contain?
16. What is a "normal" or "minor" seventh, and how many steps does it include?
17. What is the difference of distance between a "normal" seventh and the octave?
18. What is a "normal" or "perfect" octave, and how many steps does it contain?
19. What is a "normal" or "major" ninth, and how many steps has it?
20. What is a "normal" or "major" tenth, and how many steps does it include?
21. To what lower terms are tenths and larger intervals usually reduced?
22. What interval would a ninth equal if reduced an octave?
23. How many steps distant is a "major" second from the prime? From the third?
24. How many steps distant is a "perfect" fourth from the third? From the fifth?
25. How much larger is a "major" sixth than the fifth?

§ 3

26. In which direction are intervals usually reckoned?
27. What is an under-interval?
28. What normal interval does a whole tone step produce?
29. What letter is to be placed before a figure to indicate an under-interval?
30. Give the under-second of e.
31. What normal interval do two whole steps make?
32. If d is the prime, what would you call f sharp?
33. Give the under-third of d.
34. How many degrees and steps does the under-fourth contain? How many letters does it include?

35. Give the under-fourth of b flat.
36. What kind of interval is b flat—e flat?
37. Name the under-fifth of a-flat.
38. Three and one-half steps form what normal interval?
39. Name the over-sixth of f sharp. The under-sixth of f sharp.
40. Give the under-seventh of a-sharp.
41. What interval is a whole-tone step smaller than the octave?
42. Name the interval a whole step larger than the octave.
43. What is the under-ninth of c flat?
44. How much larger is the tenth than the ninth?
45. Name the over-tenth of c flat.
46. Name the under-tenth of e sharp.
47. Is there any difference in size between an over-interval and an under-interval of the same name?
48. If not, in what does the mode of thinking them essentially differ?

§ 4

49. How are intervals modified?
50. What is the sign used with the figures to express raised tones?
51. What sign is used to express lowered tones?
52. What is the difference between a chromatic half-step and diatonic half-step?
53. What sort of an interval is d-g sharp?
54. Can differently named intervals have the same number of steps?
55. What kind of interval is d a-flat?
56. Does the naming of intervals depend entirely upon steps, or must other things be considered?
57. If we would have to indicate doubly extended or contracted intervals, how would we do it? Give examples.
58. What is the augmented prime of a-sharp?
59. Give the lowered under-prime of c flat.
60. Name the raised second of d sharp.
61. What note is enharmonically identical with e double sharp?
62. What over-interval would f sharp produce with d sharp?
63. Give the raised under-third of d sharp.
64. Name the lowered under-third of g sharp.
65. What other under-interval is the same, regarding the number of steps, as the lowered under-third?
66. What is the augmented fourth of d flat?
67. What is the raised under-fourth of a-flat?
68. Give the lowered fourth of g sharp.
69. Give the lowered under-fourth of c sharp.
70. Does it make any difference in figuring intervals to sound the tones comprising them simultaneously or successively?
71. What is the lowered under-fifth of c sharp?
72. What under-sixth has the same number of steps as the lowered under-fifth?
73. Give the augmented fifth of f sharp.
74. What is the minor sixth of f sharp?
75. How much do we enlarge an interval when we augment it?
76. How much smaller do we make an interval when we contract it?
77. What does the raising of the upper tone of an over-interval do to the latter?
78. What does the raising of the lower tone of an under-interval do to the latter?
79. Name the lowered under-sixth of b.
80. What seventh corresponds in size to the augmented sixth of c?
81. What kind of a second is g a-flat?
82. Give the lowered under-prime of f; with what under-second does it agree in number of steps?
83. What is the difference between g a-flat and g g-sharp? Why have these intervals different names?
84. If a-flat is prime, what would you call a-double-flat below it?
85. If f sharp is prime, what would you call e flat below it?
86. Give the minor sixth of a-flat.
87. What is the raised under-fifth of c sharp?
88. What interval does a-sharp form above b?
89. What interval does a-flat form below g?
90. What interval does a form below g flat?
91. If a double flatted note had to be lowered, how would you indicate it?
92. Name two intervals requiring threefold flatted notes, and one interval requiring a threefold sharped note.

(Triple flats or sharps are never used in practical music, because enharmonic changes are resorted to, but theoretically they have to be admitted.)

§ 5

93. How many kinds of consonant chords are there?
94. What are dissonant chords?
95. Name the chords that form the foundation of harmonic structure.
96. Describe the sound and construction of the major chord.
97. Describe its opposite.
98. Where is a minor third to be found in a major chord?
99. Where is a major third to be found in a minor chord?
100. Of what kind of a third and fifth does a major chord consist?
101. When the minor chord is measured downward, what kind of intervals appear?
102. Is the minor chord of the same value and importance as the major chord?
103. Around what chords does all music revolve?

§ 6

104. Give the ascending chain of fifths produced by the natural notes.
105. Give the descending chain of fifths produced by the natural notes.
106. In what do the perfect fifths derived from b-f distinguish themselves from all others?
107. Give the ascending chain of fifthsproduced by sharped notes.
108. Give the descending chain of fifths produced by flatted notes.
109. Name the ascending chain of fifths produced by double sharped notes
110. Name the descending chain of fifths produced by double flatted notes.
111. Give a complete chain of fifths, starting with f double flat, and ending with b double sharp.
112. What are the main pillars of all major and minor chords?
113. Name the major thirds that have no chromatic signs, those that have both notes sharped, those that have them flatted, those that have them double sharped and those that have them double flatted.
114. Give the minor thirds that have no chromatic signs.
115. How can you make major thirds out of minor thirds having natural notes; those having sharped notes and those having flatted notes?
116. How many ways are there to turn major thirds into minor? Give illustrations.
117. How do we indicate major chords by letters?
118. What would you add to turn them into minor?
119. How would you indicate e flat minor, f sharp minor, and c double sharp minor chords?

§ 7

120. Of how many major and minor chords is any tone a member?
121. If a given tone is the third of a major chord, what under-interval will the prime form with it?
122. If a given tone is the third of a minor chord, how do you find the prime?
123. If you know the fifth of a major chord, how will you find its third?
124. When a given tone is the fifth of a minor chord, how do you figure its third and prime?

§ 8

125. When is a chord in its fundamental position?
126. What do we call a chord, when it is not in its fundamental position?
127. If a chord is in its fundamental position and in close position, what intervals will the notes comprising it form?
128. Explain the difference between close position and open position.
129. Define a chord in its first inversion.
130. What intervals do its notes form, when it is in close position?
131. What name is often given to a chord in its first inversion?
132. What is meant by the second inversion of a chord?
133. When it is in close position, what intervals will the tones of a chord in its second inversion form?
134. Give the name commonly applied to a chord in its second inversion.
135. When a chord is in open position, how do you bring it to its close position?
136. Where are inversions of chords found in compositions?
137. Can a composition end with a chord in open position?

§ 9

138. What is a chord?
139. What is meant by Key in Harmony?
140. Name the principal chord of a key.
141. From which chord does the key branch out?
142. Does the key branch out downwards as well as upwards?
143. What is the nearest related chord on the upper side called?
144. What is an Under-Dominant?

145. What is a Subdominant?
146. How many kinds of functions (or offices) are there within a key?
147. How far apart is the prime of the Dominant from the prime of the Tonic?
148. How far away from the prime of the Subdominant is the prime of the Tonic chord?
149. What tone of the Tonic is identical with the prime of the Dominant chord?
150. What tone of the Subdominant is always identical with the prime of the Tonic chord?
151. When is a key major?
152. When is a key minor?
153. Which chords determine the signature of a major key?
154. Which chords determine the signature of a minor key?

§ 10

155. Generally speaking, what is a scale?
156. As what does modern harmony consider scales?
157. If you use the arpeggio of a major chord and fill up the gaps with other notes of a major key, what will you produce?
158. What chord forms the framework of the c minor scale?
159. Where are the half steps to be found in a major scale?
160. Where are the half steps in the pure minor scale?

§ 11

161. Why is modern taste not satisfied with the old pure minor scale?
162. What is the difference between the pure minor scale and the harmonic minor scale?
163. What note not in the signature does the harmonic minor scale introduce?
164. What happens to the mD?
165. Describe the effect the maD has upon the key.
166. How many dominant chords can be used in a minor key?
167. Mention the fact that stamps the maD chord as a foreign chord.
168. How old are the mixed modes?
169. What kind of step is there between the sixth and seventh degrees of the harmonic minor scale?

§ 12

170. Why is the progression from the sixth to the seventh degrees of the Harmonic minor scale difficult to sing?
171. Explain how the unmelodic step in the Harmonic minor scale is changed in the Melodic minor scale.
172. What is the descending Melodic minor scale?

§ 13

173. Describe the character of the major key and its opposite, the minor.
174. How is a minor key brightened?
175. Can a major key be darkened? If so, how?
176. Where must we look in the major key for the chord corresponding to the maD in the minor key?
177. Will the reverse of the above hold good? If so, why?

§ 14

178. In practicing the writing of chord connections, what number of parts is considered the best?
179. Name the highest voice.
180. What is the lowest part called?
181. Give the name of the lowest part of the female voices.
182. What is the high male voice called?
183. Between what parts is the alto to be found?
184. What part comes between the alto and the bass?
185. What part usually carries the melody?
186. Name the part next in importance to the soprano.
187. How high can the student of this text-book go with the soprano part?
188. Under what note should you not go in the bass part?
189. If you have only three tones in a chord, and four parts to write, what must you do?
190. Which is the best note for doubling?
191. Next to this, which note is the best to double?
192. Can the fundamental ever be trebled?
193. What note of the chord should generally not be doubled?
194. Which note can be omitted?
195. Can the doubling occur in the same tone-region, or must it occur in another octave?
196. What note is never omitted?

197. How far apart can the soprano be from the alto?
198. How far away can the tenor be from the bass?
199. What is the greatest distance allowed between the tenor and the alto?
200. Name the best note of a chord for the bass.
201. What is the next best?
202. What note is in the bass part at the close of a musical sentence?
203. Which is the most reposeful note to begin and close with in the soprano part?
204. When you have the soprano and alto parts on one treble staff, how do you indicate them?
205. How do you indicate bass and tenor parts on one staff?
206. Are there any objections to doubling the fifth, when the third of the chord is in the bass?
207. When the fifth is in the bass, what do we generally do?
208. Can the fifth of a chord be omitted?

§ 15

209. How many movements of parts are possible?
210. Define similar motion.
211. What is parallel motion?
212. Define contrary motion.
213. What is oblique motion?

§ 16

214. What is the principal rule for part-writing?
215. Why are parallel octaves and fifths prohibited?
216. What happens when parts move in parallel octaves?
217. May the pupil write octaves and fifths in contrary motion?
218. What progressions are the most desirable?
219. How should every part proceed?
220. How should the bass part move when chords change?
221. Are there any restrictions in the movement of parts when the same harmony is continued?
222. What forms the basis of melody?
223. In the bass part, can the thirds of chords be taken by leap?
224. What progressions are preferable to those by leap?
225. Is it correct to skip from the fifth in the bass part?
226. What tones of two chords should be retained in the same voice?
227. When may the bass skip to the fifth?
228. Is the pupil allowed to cross the parts?
229. Is the standing still of two parts at the distance of an octave or fifth objectionable?
230. Are there any objections to parts skipping an octave higher or lower?

§ 17

231. How are chord connections classified in this method?
232. What is the object of this plan?
233. What are the principal chords of the major key?
234. Name all the chord connections possible between the principal chords of the major key.
235. What are the principal chords of the minor key?
236. Name all the chord connections possible in the minor key between the principal chords.
237. Why must you figure the corresponding chord connections in the minor key in the opposite manner as the major key?

§ 18

238. What is the Fifth step in the major key?
239. Between what chords does it occur?
240. What are its characteristics?
241. What is the Fifth step in the minor key?
242. Between what chords does it occur?
243. What are its characteristics, and how do they compare with the major key?
244. Why is the doubling of the third not allowed in the major D or in the minor S?
245. When, and in what chords is the doubling of the third permitted?
246. Do the rules for writing in minor differ from those for major?
247. What note of the mS is the same as the prime of the mT?
248. Between what members of the mT and mS does the leading tone step occur?
249. Between what members of the T and D does the leading tone step occur?

§ 19

250. What do the figures 1, 3, 5, written above or below T, D, S, mean?
251. Explain the meaning of the two dots . .
252. How are the measures made clear in exercises indicating only the tonal functions of the chords?

253. In how many keys can these exercises be worked out?
254. What parts are called the outer parts?
255. What must the middle parts principally do?
256. What is a dominant six-four chord?
257. What are suspensions?
258. Are dissonant tones allowed to be doubled?
259. In resolving the D^{7}_{4} into D^{6}_{5}, is it good to double the 5 of the latter? What tone should remain doubled in this resolution?
260. In these exercises, what do the notes under the letters mean?
261. Is it better to repeat notes or tie and write them as long notes within the same measure?

§ 20

262. Explain the term cantus firmus.
263. How do we indicate the chords?
264. When do we dispense even with letters?
265. What do the figures indicate?
266. When do the figures refer to the soprano part?
267. Give the meaning of m under a note.
268. Where should you write the chord signs when the soprano is given? When the alto or tenor is given? When the bass is given?
269. What is the difference in meaning of figures above and below the letters?
270. How do you unmistakably indicate the given voice?
271. Must the sixth and fourth of a D^{6}_{4} invariably progress by steps of a second when going to D^{5}_{3}? Give changed resolutions, if you can.

§ 21

272. Explain the Fourth step in the major key and in the minor.
273. With what other step does the Fourth step seem to be the same?
274. Tell the difference of effect between the two chord connections apparently alike.
275. When can the third of the S or the mD be doubled?
276. How do we mark the pedal-point?

§ 22

277. Give an explanation of the Whole-tone step in both major and minor keys.
278. Why do we meet consecutive fifths and octaves so readily in this chord connection?
279. How can these consecutives be avoided?
280. What objections are there to the augmented fourth?
281. When is it ever allowed?
282. What permissible interval can we write instead of the augmented fourth, and how do you manage it?
283. In writing each part on a separate staff, what rules should be observed as regards the stems of the notes?
284. What tabooed skip in the bass is often allowed in this chord connection?
285. Does the D in any position after the S define the key sufficiently?
286. What is the D^{6}_{4} really between the S and D?

§ 23

287. Explain the Fourth step where one chord is major and the other minor.
288. What about the augmented fifth?
289. What follows the diminished fourth?
290. Where should the diminished fourth not be used?
291. Why must the Dominant six-four of the minor key have a lowered sixth?
292. Can we have the same changed resolutions of the D^{6}_{4} in the minor key as in the major key?

§ 24

293. Explain the Whole-tone step where one chord is major and the other minor.
294. What objections are there to the augmented second?
295. How do you remove the same?

§ 25

296. What is meant by Change of Mode (of chords)?
297. Illustrate where it occurs in the key so far explained.
298. Where is the chromatic step to be found?
299. What are you obliged to observe concerning it in this chord connection?
300. What is meant by cross-relation?
301. Is false relation felt in other chord connections than this?

§ 26

302. What is modulation?
303. How only can it be made to occur?
304. What sign do we use to indicate a modulation?

§ 27

305. What are cadences?

§ 28

306. What chords are the principal discords of the key?
307. How many subdominant sixth chords has a major key?
308. How many dominant seventh chords are there in the major key?
309. How many dominant seventh chords are contained in the minor key?
310. Has the minor key more than one subdominant sixth chord?
311. What tone of another chord does the dominant seventh chord always add?
312. What tone of another chord does the subdominant sixth chord always add?
313. How would the thorough bass figuring count the intervals of all chords?
314. What did the thorough bass mean by $\frac{6}{5}$, $\frac{4}{3}$, 2?
315. When is the S6 in its fundamental position?

§ 29

316. How does the seventh always move?
317. In what direction does the seventh generally go?
318. When tones happen to form an interval of a second, what do they do?
319. When only is the merging of one tone into another considered good?
320. When is the upward movement of the seventh allowed?
321. Can the fifth of a seventh chord be omitted?
322. When does the Tonic appear without its fifth?
323. When is third doubling in four part harmony considered faulty, and when only is it good?
324. Is it possible to have the seventh as bass note for the second last chord?
325. When need the seventh of a D7 not progress by step of a second?
326. Does the mD7 progress like the maD7?
327. When does the seventh of a chord, in the minor key, not need to move?
328. Can the resolutions of the mD7 be disguised by means of intermediate chords?

§ 30

329. How are the movements of parts influenced when the fifth and sixth of a subdominant sixth chord are sounded together?
330. Is it necessary to sustain in the bass part the 6 of a S6 when the D follows?
331. When can the 6 of a S act like the prime of a D7 of the D?
332. How can you turn a S6 into a D7 of the D?
333. Does the use of added (dissonant) tones with the dominants increase or lessen the danger of consecutive fifths and octaves? Why?
334. How can you change a minor S6 into a D7 of the D?
335. What does the 6 or 7 beside a chord sign or chord letter mean?
336. What do these figures below or above the signs indicate?

§ 31

337. What is meant by figuration?
338. Explain chord tones.
339. What is meant by passing tones?
340. To what class do repeated tones belong?
341. Illustrate auxiliary tones.
342. Can the seventh of a D be used in figuration at any time?
343. What about the use of the 6 in the S or mS?
344. Are there any objections to skipping in the bass part from the fifth of one chord to the fifth of another?
345. Can a dissonant tone be dropped without being resolved?
346. What is meant by divided figuration?

§ 32

347. What does the addition of a 7 do to a Tonic?
348. What becomes of a Tonic to which a 6 is added?
349. What tonal function is suggested when the third of a T is chromatically lowered?
350. How can you change the mT into a mS6, and consequently change the meaning of the chord and modulate?
351. What meaning does it give to a mT to chromatically raise its third?

§ 33

352. How does a diminished triad get its name?
353. From what discords can the diminished triad be derived?
354. Is the diminished triad a concord?
355. What note may be doubled in the diminished triad when it is part of D7, and what note when it is part of a mS6? Explain with examples in e flat major and g minor keys.

§ 34

356. What is the relationship of the principal chords?
357. What other relationship exists than that of the Fifth?

358. Explain a relative chord.
359. Define a correlative chord.
360. When the principal chord is major, of what mode are its relative and correlative chords?
361. Where is the relative of a principal chord (major) situated?
362. Where is the correlative of a major chord situated?
363. What members of the principal (major) chord does the relative contain?
364. What members of the principal (minor) chord does the correlative possess?
365. For what chord can the relative and correlative chords be used as a substitute?
366. What relationship do the relative and correlative chords imitate?
367. What proof does the relationship by the Third furnish that major and minor are opposites?
368. When the principal chord is minor, of what mode are its relative and correlative chords?
369. Where is the relative of a minor chord situated?
370. Where is the correlative of a minor chord situated?
371. How far apart are the relative and correlative chords?

§ 35

372. Give the Tr of B major, and the Tc of D flat major key.
373. Name the Sr of E major, and the Sc of A flat major key.
374. What relative chord does the S6 with cancelled fifth produce?
375. What chord is the Dr of G major, and what chord is Dc of F major key?
376. Which correlative chord of the major key requires an accidental?
377. What correlatives and relatives are represented by the same chords in the major key?
378. How should you decide their relationship when analyzing?
379. Can a chord have more than one relationship?

§ 36

380. Name the mTr of E minor, and mTc of D minor key.
381. Give the mDr of F-sharp minor, and the mDc of C minor key.
382. What relative chord do we get when we cancel the prime of the mD7?
383. Name the mS6 of G-sharp minor, and the mSc of F minor key.
384. Explain the chord of the Neapolitan sixth.
385. Name the correlatives and relatives represented by the same chords in the minor key.
386. What correlative needs an accidental in the minor key?

§ 37

387. How do we find the equivalent chord connections in major and minor keys?

§ 38

388. What is the special feature of the relative and correlative chords?
389. Is skipping to the fifth in the bass part allowed for relative and correlative chords?
390. Where in the cadence is the natural position of the Tr, Sr and Dr?
391. Where do the correlatives take their places in the cadence?
392. Can the doubling of the thirds of relatives and correlatives occur in parallel motion?

§ 39

393. What is meant by a deceptive close?
394. For what chord can the relative and correlative chords be substituted?
395. Of whose nature do the relative and correlative chords partake?
396. What is characteristic about the deceptive close?
397. When is the distance of an octave between alto and tenor allowed in the deceptive close?
398. Give, in the minor key, the equivalent of the deceptive close D7-Tr in the major key.

§ 40

399. Illustrate the chord connection of a Minor Third step, descending from major to minor chord, or the reverse ascending; use F major and E minor keys.
400. Are there any special difficulties?

§ 41

401. Illustrate the chord connection of a Third step, ascending from major to minor chord or the reverse descending; use G major and D minor keys.
402. Give some exceptional leading of parts not violating any rules.

§ 42

403. Illustrate the chord connection of a Whole tone step, ascending from major to minor chord, or the reverse descending; employ D major and G minor keys.
404. How is the danger of consecutive fifths and octaves avoided?

405. What especial advantage is there in the doubling of the thirds of relative or correlative chords?

§ 43

406. Illustrate the chord connection of a Half-tone step, ascending from minor to major chord or the reverse descending. Use D major and C minor keys.
407. Are there risks of consecutives in this step?
408. What augmented interval is to be avoided?

§ 44

409. Illustrate the chord connection of a Fourth step ascending from minor to major chord or the reverse descending. Use B-flat major and F-sharp minor keys.

§ 45

410. Illustrate the chord connection of a Minor Third step, going from minor to minor chord or from major to major chord; use E-flat major and B minor keys.
411. Are the steps all diatonic?

§ 46

412. Illustrate the chord connection of a Tritone step, ascending from major to minor chord or the reverse descending.
413. Where is an augmented interval to be found, and how can it be avoided?

§ 47

414. Does the use of relative and correlative chords give many possibilities of modulations?
415. What should you do when the change of meaning of chords employed brings the modulation too rapidly to the end?

§ 48

416. What abbreviation do we use to indicate the major Dominant of a minor key?
417. What abbreviation do we make use of to indicate the minor Subdominant of a major key?
418. How do you distinguish in the abbreviations (indications of tonal functions) the minor Subdominant of a minor key from the minor Subdominant of a major key?
419. Name the miSc and miSr chords of F, D, A-flat and B major keys.
420. Name the maDr and maDc chords of B, G-sharp, B-flat and E minor keys.
421. Which appears most frequently of these two chords, the miSc or maDc?

§ 49

422. What is the good of classifying chord connections?
423. Name some of the chord connections produced by using the relatives and correlatives of the miS or maD with other chords of the key.

§ 50

424. When have we a deceptive close in the minor key?
425. When is the distance of an octave between alto and tenor approved of in this deceptive close?
426. Illustrate the typical forms of the deceptive close in minor.
427. Illustrate some rare forms.
428. Give an illustration where the third instead of the prime is in the bass.

§ 51

429. Illustrate the chord connection of a Chromatic step, ascending from major to minor chord, or the reverse, from minor to major chord descending. Use A major and F minor keys.
430. Of what consecutive and augmented interval must you beware here?

§ 52

431. Illustrate the chord connection of a Third step, from major to major chord and from minor to minor chord; employ E major and F-sharp minor keys.
432. What step is peculiar to this chord connection?

§ 53

433. Illustrate the chord connection of a Diminished Fourth step, descending from major to minor chord or the reverse ascending; use B major and B-flat minor keys.
434. What two augmented intervals are possible here, but undesirable?

§ 54

435. Illustrate the chord connection of a Half Tone step, from major to major and from minor to minor chord; use D-flat major and G-sharp minor keys.
436. What kind of step can all the notes form when the chords are placed side by side?

437. Where is the augmented second to be found?
438. Which is the best way to avoid all the dangers of consecutives?

§ 55

439. Illustrate the chord connection of an Augmented Second step, ascending from major to minor chord or the reverse descending; use F-sharp major and D minor keys.
440. Where is the debarred augmented sixth to be found?
441. What other augmented intervals can be encountered here?

§ 56

442. Illustrate the chord connection of a Tritone step, from major to major chord, and from minor to minor chord; use G-flat major and E minor keys.
443. What is meant by tritone?
444. Of what augmented step is the diminished third step the inversion?

§ 57

445. Illustrate the chord connection of a Diminished Third step, descending from major to minor chord or the reverse ascending; use G major and C-sharp minor keys.
446. Where can the interval of an augmented fourth occur?
447. How are the augmented sixths avoided?
448. Why are these chords so distantly related?

§ 58

449. Does the use of the relatives and correlatives of the miS and maD afford many means of modulation?
450. How long should you keep to the old key when analyzing?
451. Where are points of modulation to be located?

§ 59

452. What does the maD do to the minor scale?
453. What does the miS do to the major scale?
454. How is the augmented interval in scales changed?
455. Can the third of the D of the major key be lowered?
456. Can the third of the mS of the minor key be raised?
457. How is this indicated in the chord signs of tonal functions?
458. Where is the lowered third of a D supposed to lead to?
459. Where ought the raised third of a mS go to?
460. Are these two chords principal (key-making) chords?
461. What ancient church mode does the mS3< reproduce when its third does not progress to the 3 of the maD?
462. What characteristic church mode does the D3> reproduce when its third does not go to that of the miS?
463. Which of the two chords, mS3< and D3> illumines its key?

§ 60

464. Can a key branch out and reach above the dominant or below the subdominant without inducing a modulation?
465. What is the effect of the DD?
466. What are the results of the SS and miSS?
467. Explain the effects of the mSS, mDD and maDD in the minor key.

§ 61

468. What do you call the chord resulting from the chromatic alteration of the third of the T?
469. Describe the effect the Tv has upon the major key.
470. Describe the effect of the mTv.
471. Name the Tvc and Tvr of G, D-flat, B and E-flat major keys.
472. Name the mTvr and mTvc of E-flat, B, C-sharp and D minor keys.
473. Why do composers sometimes write chords enharmonically changed?

§ 62

(With this paragraph, the author's Essay on the Key-extension of Modern Harmony should be studied. Therefore, these questions refer to the essay as well as to the text-book.)

474. Is there another alteration of chords possible besides that of changing their thirds?
475. What do we call such chords?
476. Into what mode is a major (principal) chord always changed when altered?
477. What effect has the simultaneous alteration of the prime and fifth of a minor chord?
478. Does the alteration raise or lower the outer notes of a major chord?
479. What does the alteration do to the outer notes of a minor chord?
480. Give the tone that always forms the connecting link between the principal and its altered form.

481. Have the aS, aD, aT, amiS, amT, amS, amD and amaD any relative and correlative chords?
482. Are they used extensively?
483. What series of chords gives most exquisite tints to tonal harmony?
484. Explain the term "Variation Theory."
485. Does Wagner ignore tonality?
486. Who may be looked upon as the father of modern harmony?
487. Who virtually settled the question of equal temperament?
488. What instrument has had a great influence upon the development of modern harmony?
489. Can any key contain all existing chords?
490. What did Fetis prophesy?
491. If all chords could be contained in all keys, how would one key really differ from another?
492. Can the SS, DD, and miSS have relative and correlative chords?
493. Is it possible to have relative and correlative chords of the mSS, mDD and maDD?
494. Can the "variation theory" be applied to the SS, DD, miSS, mDD, mSS, and maDD chords?
495. What chords represent the extreme limits of chord relationship?
496. When does a modulation occur?
497. What chord must always remain the tonal center?
498. Explain the law of relativity.
499. To what class of chords must all discords be traced?
500. Does all melody rest upon an harmonic basis, given or implied?
501. What is polyphony?

§ 63

502. Define a cadence.
503. Explain a complete close.
504. What is a half close?
505. Describe the deceptive close.
506. Does modern theory limit half closes to the dominants?
507. Are deceptive closes possible from the subdominant side as well as from the dominant?
508. Give the meaning of Tierce de Picardie.
509. Is it possible to close a piece of music in the major key with its tonic variant?
510. Could a piece ending in major begin with its tonic variant?
511. Do composers ever end pieces on half closes?
512. Has ever anything else but the prime of a chord been used in the bass for a close?
513. When must the listener find the close for himself?

§ 64

514. What are the guiding points for all chord connections?
515. How many chord groups are there?
516. How did we name the chord connections?
517. Within what interval can all chord connections be included?
518. What is meant by the inversion of an interval?
519. How many different kinds of steps are contained within each chord connection?
520. What coincides with a double fifth step?
521. Which is the most readily understood step of all?
522. What are chords "foreign to the scale"?
523. Does the greatest power of expression in harmony consist in frequent changes of key or in extending the boundaries of the key?

§ 65

524. Explain what dissonance is.
525. How is the consonance of a major or minor chord disturbed?
526. What forms the basis of every discord?
527. Has the tonic chord any characteristic additional tone?
528. Are discords ever produced by adding tones to the tonic?
529. How can you explain such formations?
530. What is a suspension?
531. Can a suspension tone be the substitution of a neighbor tone, more than a whole tone above or below, in place of a tone belonging to a consonant chord?
532. In connection with what are suspension chords always thought of?
533. When is a suspension prepared?
534. When is a suspension unprepared?
535. What is the "percussion" of a discord?
536. Explain the "resolution" of a discord.
537. What are "retardations"?
538. Does it produce a good effect to write the sustained note simultaneously in the same octave position as the chord tone which it retards or suspends?

539. Name the four possibilities of suspensions before any chord tone.
540. Which are the most readily understood suspensions from below?
541. Name the best suspensions from above.
542. How can the resolution of a discord be deferred?
543. What is a resolution by progression?
544. What is an ornamentation of a dissonance?
545. Explain passing harmonies.
546. May a passing tone enter freely on a heavy beat?
547. What are leading tones?
548. Can leading tones be used without reference to what precedes and at any place in the measure?
549. What does chromatic alteration of chord tones mean?
550. Can an altered tone enter freely on a heavy beat?
551. Are added and suspension tones to be found in the same chord?
552. Is it possible to have added and altered tones in the same chord?
553. Can suspension and altered tones be combined in the same chord?
554. Can altered tones be united with added and suspension tones in the same chord?
555. Name some added tones to the dominant of E and A major keys.
556. Give six illustrations of suspensions in the D7 and D9 of B-flat major key.
557. Give six illustrations of alterations, etc., in the D7, and D9 of D major key.
558. Give six illustrations of alterations, etc., of the S6 in A-flat major key.
559. Give six illustrations of alterations, etc., of the minor subdominant of B major key.
560. Can any chord of any tonal function be changed by additions, etc.?
561. What must you search for when you unravel puzzling chord formations?
562. What tones form the preparation of a dissonance?
563. On what part of a beat does the suspension tone appear?
564. How must dissonances always move?
565. Explain syncopation.
566. Are syncopated consecutive fifths or octaves allowed?

§ 66

567. What are Dominant Ninth chords?
568. Where do other seventh chords than the D7 occur?
569. Where does the dominant with lowered ninth borrow its 7 and 9 from?
570. How many dominant ninth chords has the minor key?
571. How many dominant ninth chords has the major key?
572. Can the 9 of a D be dropped and then not require a resolution?
573. Which note of the D9 is the most readily omitted in four part harmony?
574. Can the 3 or 7 be left out in the D9?
575. Is the prime of a D9 ever omitted?
576. Are the tones of a D9 usually kept close together?
577. What tones of a D9 are best for the bass?

§ 67

578. Tell what you can about the D11.
579. What have some theorists done with this chord?
580. Can the 11 disappear without resolution?
581. Are all of its tones always present?

§ 68

582. How many D13 chords can you name in the major key?
583. How many D13 chords are there in the minor key?
584. Do these chords usually appear in their complete form?
585. When must the D13 be looked upon as a fundamental chord?

§ 69

586. Of what is anticipation the reverse?
587. On what part of a measure does the anticipation occur?
588. Does anticipation occur only in certain parts of the harmony?
589. Can anticipation appear in all parts simultaneously?
590. Can tones be interpolated between the anticipation and its subsequent tone?
591. Are suspensions and anticipations allowed simultaneously in the same chord?
592. Can any tone of the following chord be used as an anticipation tone?
593. Can chord tones, which do not appear in the following chord but could belong to it, be used as anticipation tones?
594. What can you say about the Nota Cambiata?
595. Can anticipation be used in a syncopated manner?
596. Give the difference between anticipations, suspensions and syncopations.
597. Can suspension or passing tones ever be anticipated?

§ 70

598. What is the difference between a diatonic and a chromatic passing tone?
599. Can passing tones occur in several parts simultaneously?

600. What are passing tones by skip?
601. How many passing tones by skip can there be?
602. Could a passing tone by skip embellish a suspension tone?
603. What are circumscriptive passing tones?
604. What lower auxiliary tones sound best as embellishments?
605. As what can the augmented second in the Harmonic minor scale be considered?
606. Explain the chromatic scale.
607. Since the sounding tones of the chromatic scale are always the same, how must the notation of it be decided?
608. In what way does the notation of the ascending chromatic scale differ from the descending?

§ 71

609. Is there a syncopation possible in which some parts drag behind the rest?

§ 72

610. In what way do delayed progressions differ from suspensions?
611. Can a suspension resolve to another chord tone than the expected one?
612. Must suspensions resolve by degrees?
613. What are elliptical resolutions of suspensions?

§ 73

614. What are sequences?
615. Is the sequence a melodic or harmonic formation?
616. Are the harmonic functions suspended during the sequence?
617. Can leading tones and dissonances be doubled in a sequence?
618. Do other seventh chords than the D7 appear in sequences, and have they any tonal significance?
619. How many repetitions does a sequence require?
620. As what must the violation of rules be considered in a sequence?
621. Is a sequence limited to any number of parts?
622. How do we mark sequences?
623. Do composers always bind themselves to strict exactness in sequences?
624. At what intervals do sequences usually imitate?
625. Can sequences ever modulate?
626. Is there any limit to the extension of a sequence motive?
627. Must the length of a sequence motive coincide with the time of the measure?
628. Are consecutive fifths and octaves resulting from the transpositions of the motive allowed in sequences?
629. Can any concord or discord be used as a pattern for a sequence?
630. Can a passing tone have the liberty not to issue forth from the nearest chord tone, but skip from some other member of the chord? Illustrate.
631. How far apart may the lower parts occasionally be from the upper three in five part harmony?
632. Is the distance of an octave allowed on other occasions in five part harmony?

§ 74

633. What is a key?
634. What is the difference between transition and modulation?
635. How are the relationships of modulations judged?
636. When is a modulation remote?
637. What are intermediate cadences?
638. What chord always remains the center of the key?
639. Give the simplest form of cadence in the major key.
640. Give the simplest form of cadence in the pure minor key.
641. How can we make each chord in the cadence a dominant of the following chord?
642. Is an intermediate cadence the subordinate center of a chord circle?
643. What sort of embellishments of tonal functions are intermediate cadences?
644. How do we indicate the intermediate cadences?
645. Do the chord signs in round brackets refer to the tonic of the key?
646. Can any relative or correlative chord be circumscribed by its own dominant or subdominant?
647. Does an intermediate cadence ever follow a chord instead of preceding it?
648. If so, how do we indicate it?
649. Does the chord circumscribed by an intermediate cadence ever remain unheard?
650. How do you indicate the imagined tonic of an intermediate cadence?
651. What usually takes the place of such a skipped chord?
652. Can any subdominant sixth or dominant seventh embellish harmonically any tonal chord?
653. When you see the chord signs of intermediate cadences, what must you look for first of all?
654. What does the abbreviation $\overline{\text{enh}}$ indicate?

§ 75

655. In which direction does the third of a D7 go to the tonic?
656. Does the third of a D7 ever descend to the fifth of the tonic?
657. Is the third of a D7 ever omitted?
658. What happens to the seventh when the D7 resolves to the tonic with the third of this chord in the bass?
659. Explain how the resolution of a chord can be regular although the progressions are free.

§ 76

660. Can any major or minor chord follow any other (major or minor) chord?
661. Must there be a connecting tone?
662. Can any discord follow any other discord?
663. When do discords connect especially well?
664. Can discords be resolved in other octaves?
665. What is an irregular resolution?
666. What is meant by enharmonic modulation?
667. Are enharmonic changes ever understood but left unmarked in the musical notation?
668. How should the dissonant tones proceed in chains of discords?
669. Can dissonant tones remain stationary and form part of the new chord?

§ 77

670. What forms of the dominant have been given special national names, and what are these names?

§ 78

671. What is a diminished triad?
672. How can a major chord be changed into a diminished triad?
673. What will change a minor chord into a diminished triad?
674. Why can there be always four modulations from each diminished triad?
675. How does it come that a few will not lead out of the key and consequently produce no modulation?
676. What makes the diminished triad a symmetrically constructed chord?
677. Is the diminished chord adapted for enharmonic changes?

§ 79

678. What are diminished seventh chords?
679. Why is this chord called a diminished seventh chord?
680. How can a diminished seventh chord be made to arise from a D7?
681. How can a diminished seventh chord be made to arise from a minor S6 chord?
682. How can a diminished seventh chord be formed out of a major chord?
683. How can a diminished seventh chord be formed out of a minor chord?
684. Can any principal, relative or correlative chord of the key be changed into a diminished seventh chord?
685. Why have diminished seventh chords chameleon-like qualities?
686. What produces the symmetrical construction of these chords?
687. How many other diminished seventh chords will any diminished chord equal when enharmonic changes are employed?
688. How many differently sounding diminished seventh chords are there?
689. Why are there no more?
690. When are the double parentheses used in the chord notation?
691. When is the diminished seventh chord only a leading tone chord?
692. Is it obligatory that all the tones of a leading tone chord must form half tone steps to the following chord?
693. Can other chords than the principal discords be used for intermediate cadences?
694. What is a whole tone scale?

§ 80

695. What is an augmented triad?
696. Of what chord is it the opposite?
697. What chord does it nearly equal, as regards surprising modulations?
698. How is a major chord turned into an augmented triad?
699. What changes a minor chord into an augmented triad?
700. From what does the augmented triad derive its name?
701. Explain how this chord is symmetrically constructed.
702. How can enharmonically changed forms of the augmented triad sound alike, and yet each have the augmented fifth in the highest, in the middle or in the lowest part?
703. Name the number of differently sounding augmented triads.
704. Why are there no more?
705. Which tone is the one that has to move?
706. What tones of an augmented triad can be doubled?
707. Can you omit any tone of the augmented triad and still preserve its meaning?
708. Is it possible to use another discord after the augmented triad?

709. Can any dominant seventh chord follow an augmented triad?
710. Could any diminished seventh chord come after any augmented triad?
711. Can the augmented triad be embellished by suspensions, etc.?
712. Is it proper to let one augmented triad follow another?

§ 81

713. Give the meaning of pedal point or organ point.
714. What may be considered the germ of the pedal point?
715. Which is the most effective tone for a pedal point?
716. Of what is the pedal point an auricular illustration?
717. Is the D ever made the bass for organ points?
718. What is a double pedal?
719. Give the meaning of triple pedal.
720. Is the S used for pedal points?
721. Can a pedal point occur in either upper or middle part?
722. When is the pedal point most effective?
723. What is an inverted pedal?
724. Must the pedal always be a sustained tone?
725. What spirit pervades in the pedal point?
726. What spirit pervades in a sequence?
727. How do we indicate the pedal point in analysis?
728. Can a modulating sequence be combined with a pedal point?
729. When the prime of the T is below the D7 chord, how do you indicate it in analysis?
730. Can the D7 ever be considered as a suspension chord delaying the tones of the tonic?

§ 82

731. Can single tones be made the pivoting points of modulations?
732. When does a dissonant tone become a member of a concord?
733. When does a member of a concord become a dissonant tone?
734. When does the member of one chord turn into a different member of another?
735. When does a dissonant tone of one discord turn into a dissonant tone of another discord?
736. Is it possible to change the meaning of a single tone and make it the means of a modulation?
737. Can enharmonic changes be employed when changing the meaning of a single tone for the sake of modulation?
738. What is meant by a chain of modulations?
739. What is the principal thing to be observed in a combined modulation?

§ 83

740. How old is the prohibition of consecutive fifths?
741. What was the organum?
742. Are there distinctions made between the allowable and unallowable consecutive fifths?
743. Where are consecutive fifths most objectionable?
744. For whom is the rigorous rule of consecutives indispensable?
745. Under what conditions will fifths occur, though originally not so written?
746. To what formations do fifths point when they recur upon the accented parts of beats?
747. May consecutive fifths be disguised by rests, suspensions, etc.?
748. Are consecutive fifths allowed in arpeggio'd chords in sequences?
749. Are grace notes, auxiliary, passing tones, etc., ever the cause of consecutive fifths?
750. How can a figuration motive produce consecutive fifths?
751. Between what closely related harmonies are parallel fifths allowed?
752. What certain forms of the D allow consecutive fifths?
753. When are consecutive fifths permitted between a S and D7?
754. When can consecutive fifths occur between seventh chords?
755. When are consecutive fifths occasionally excused between the subdominant and dominant?
756. Are parallel fifths allowed between the principal chords and their relatives and correlatives?
757. Have chromatic consecutive fifths ever been written by great masters?
758. Are there consecutives progressing by a diatonic half-step?
759. What must be observed above all in all consecutives?
760. Can consecutives be produced by mere filling-in parts?
761. Are consecutive fifths ever used as a means of expression and coloring?

§ 84

762. Is the elaboration of harmony the work of one man?
763. Who make the advances in music?
764. What have theorists to do?
765. What rules are truly rules?
766. Are there many rules above time and taste?

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